

THE 1945 B.F. GOODRICH

FARMER'S

HANDBOOK

AND

Almanac





AN INVITATION *to our friends and customers*

You are more than welcome to stop in and visit us whenever you are in town. Whether it's just to pass the time of day; or get information about tires and tire care, we like to have you come in.

We take pride in being the local headquarters for tire information. You can get from us complete information on government rules and regulations affecting tires and other rubber products.

Because we aim to provide always the finest products available, we handle the complete line of B. F. Goodrich tires for passenger cars, trucks, tractors, and implements. And, we're

ready at all times to help you get greater service from your tires, whether you bought them from us or elsewhere. You can get the benefit, through us, of all the expert knowledge of B. F. Goodrich engineers on the subject of tires and tire care.

If you haven't been in to see us before, you'll find our address on the back of this book. And we hope you'll find this book helpful. In the meantime, you have a standing invitation to stop in and see us and meet your friends and neighbors. You're always welcome.

Your B. F. Goodrich Dealer



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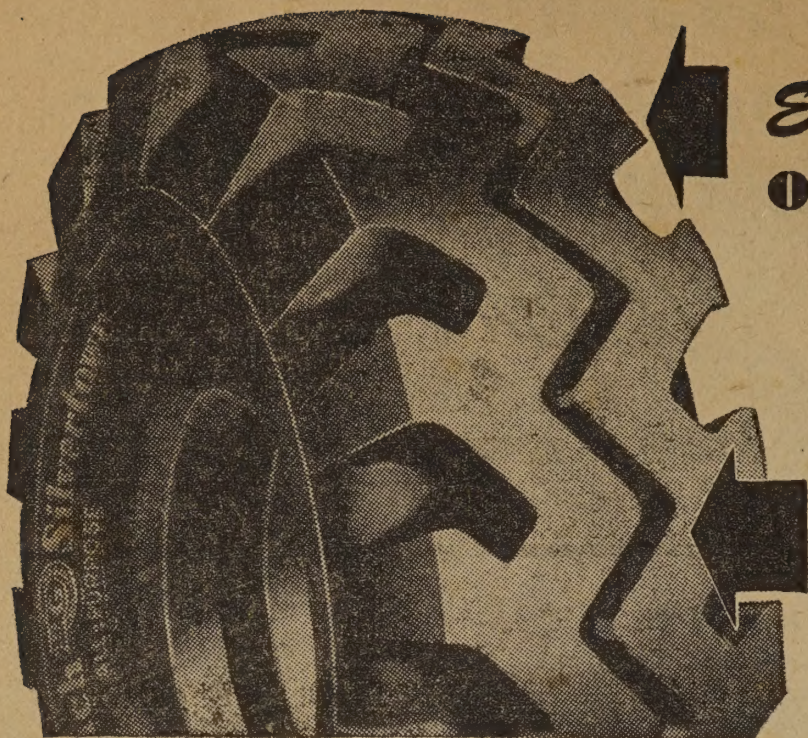
FOR 1945

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Compliments of

YOUR B. F. GOODRICH DEALER



Extra Traction for
OFF-THE-ROAD
SERVICE

Long Wear for
HIGHWAY
SERVICE

New **B. F. Goodrich All-Purpose** **Tire Cuts Farm Trucking Costs**

You'll find the B. F. Goodrich All-Purpose gives you an unusual combination of features for off-the-road traction and on-the-road wear.

Off the road, in field work, the tough cleats grip the earth. The tread design protects against sideslip as well as giving full traction both forwards and backwards. On gravel or muddy roads the open tread design cleans itself — it does not hold gravel or pack with mud.

On the pavement the All-Purpose does a money-saving job for you. The continuous ribs provide smooth going on hard surfaces. Wide riding bars give unusually large road contact area, thus distributing the wear evenly. The All-Purpose runs cooler because of the self-ventilating tread — another reason why you get longer mileage. And

underneath the tread is a rugged carcass built to give the utmost in bruise protection and long wear.

For farm trucking jobs — hauling supplies, feed, livestock, milk, and a score of other "chores" — the All-Purpose is the ideal tire. Come in and see it. We'll gladly tell you the whole story of its extra wear.

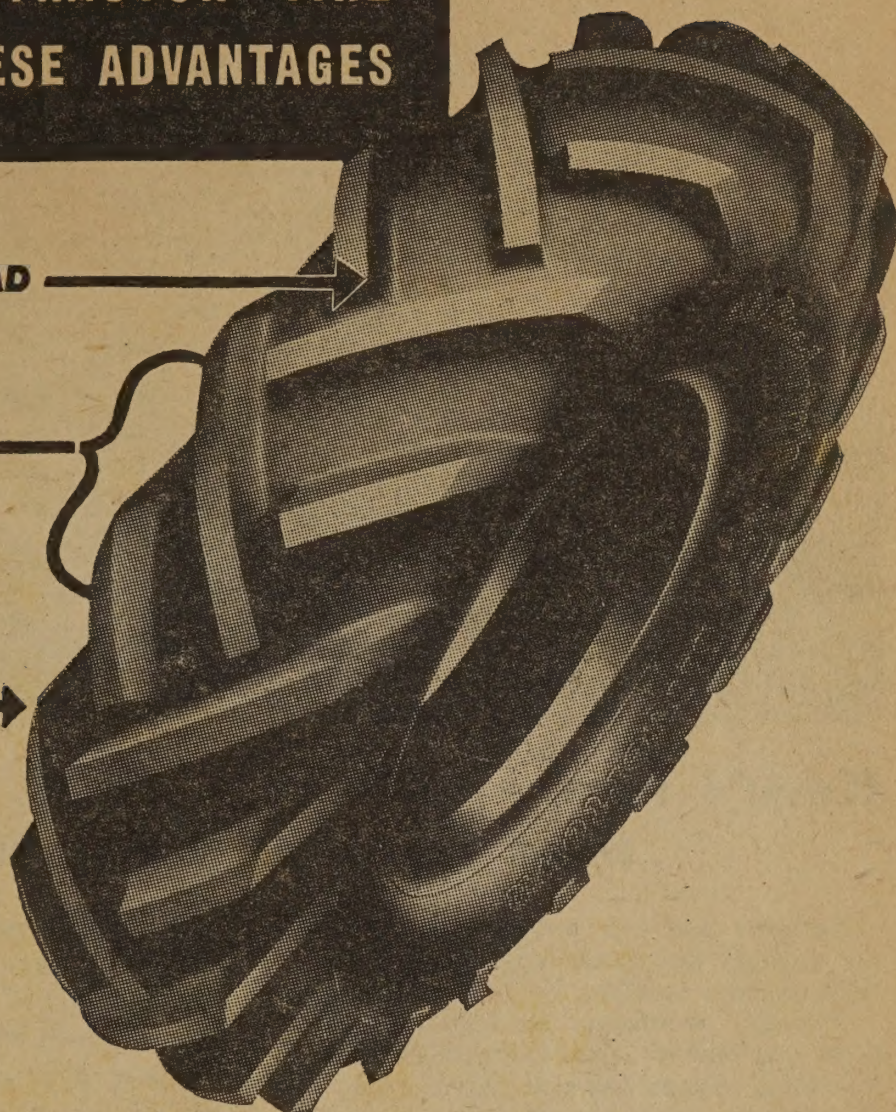


NO OTHER TRACTOR TIRE HAS ALL THESE ADVANTAGES

OPEN CENTER TREAD

PAIRED CLEATS

EXTRA HIGH
SHOULDERS



You get **FULL** traction on every job

With your tractor rolling on B. F. Goodrich tires you get added bite, grip, and pull to handle the hardest jobs. You save on fuel — you do more work in less time.

Take a look at the B. F. Goodrich rear wheel tire. Note how the cleats run in *pairs*, instead of singly. Here's a double bite—a steady pull for tough going.

See how each cleat stands alone.

Cleats are not connected with mud-catching pockets at the joint. The tread design is open and flexible. That's what makes it self-cleaning.

Shoulders are extra high to prevent sideslip, to give full traction in soft soil.

No other tractor tire gives you all these advantages plus the long life you know you can expect from every B. F. Goodrich tire.

B. F. Goodrich *Farm Service* **Tires**



Here's how you save with B. F. Goodrich tires on your implements

Chances are you are already enjoying the savings that come from having rubber tires on your tractor.

You get *maximum* savings only after your implements are equipped with B. F. Goodrich Farm Service Tires, too. As tires become more plentiful, it will be possible to change over steel-wheeled equipment to money-saving rubber tires.

Changeovers are simple and inexpensive. We will help you work out a plan so that the same set of wheels can be used on more than one implement.

Take a look at this list of savings. Then plan to come in and talk it over with us.

1. B. F. Goodrich tires reduce rolling resistance — require up to 50% less power than steel wheels.
2. You can work faster in the field.
3. You can get from job to job more quickly.
4. They save fuel.
5. They provide cushioning for the load, the equipment, and the operator.
6. They reduce vibration, save on repairs.
7. They do not cut turf or kill roots — do not damage barn floors.
8. They permit operation where steel

wheels would cut in or bog down.

9. They save horses as well as horsepower.
10. They do not build up with mud.

All B. F. Goodrich tires for implements are designed to give full cushioning, smooth rolling, and long life. Tread designs are made to match the job requirements. See us on your next trip to town.

WE HAVE TIRES FOR EVERY ONE OF THESE IMPLEMENTS

Spreaders
 Wagons
 Corn planters
 Corn pickers
 Corn binders
 Corn shellers
 Plows
 Grain drills
 Grain binders
 Combines
 Huskers
 Shredders
 Potato planters
 Potato diggers
 Mowers

Cotton pickers
 Hay loaders
 Hay choppers
 Hay balers
 Rakes
 Separators
 Windrow harvesters
 Ensilage harvesters
 Ensilage cutters
 Silo fillers
 Spray rigs
 Lime spreaders
 Garden tractors
 Wheelbarrows
 Trailers

Where to Go for *Information*

Often you may want specific information on a certain subject but do not know where to go to get it. There are usually at least three good sources of general information in each community — the county agent, the local newspaper, and the public library. If these people cannot answer your questions, they can usually tell you where to go to find the answer. Other sources of information on some common subjects are listed below.

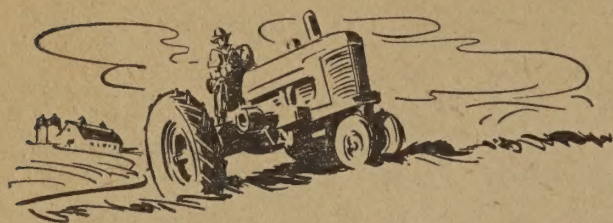
SUBJECT	SOURCES OF INFORMATION
Farming problems	Your County Agricultural Agent Your State Agricultural College The editor of your state farm magazine
Social Security	Social Security Board 1825 H St., N.W., Washington, D. C., or Regional Office
Veterans' Rights	Veterans Administration Vermont Ave. between H and I Sts., N.W. Washington, D. C., or Regional Office
Rationing of Tires and Tubes	Your local B. F. Goodrich dealer
Rationing (other items)	Your local ration board
Ceiling Prices	Office of Price Administration Federal Office Building 1 Second and D Sts., S.W., or Regional Office
Soil Erosion	Soil Conservation Service Dept. of Agriculture, Washington, D. C.
Income Tax	Nearest Collector of Internal Revenue
Prisoners of War	American National Red Cross 17th St. between D and E Sts., N.W. Washington, D. C., or Local Chapter
Fish Birds Wild Life	Fish and Wildlife Service Department of the Interior The Merchandise Mart 222 North Bank Drive, Chicago 54, Illinois
College Scholarships	Write direct to the colleges and universities in which you are interested, asking what scholarships are available.
Sending Money Abroad	Local Postoffice or Division of Money Orders Postoffice Department 12th Street and Pennsylvania Ave., N.W. Washington, D. C.
Geography	National Geographic Society Washington, D. C.
Tires and rubber	Your local B. F. Goodrich dealer or The B. F. Goodrich Co., Akron, Ohio
Minerals (identification of sample)	Bureau of Mines Department of the Interior C Street between 18th and 19th Sts., N.W. Washington, D. C.
Maps (detail map of your locality)	U. S. Geodetic Survey 14th St., between Constitution Ave. and E St., N.W. Washington, D. C.
Government employment	Civil Service Commission 8th and F Sts., N.W. Washington, D. C., or Regional Office

Rules for *Safe* Tractor Operation

*Rules compiled by the
Farm Safety Committee of the Farm Equipment Institute,
and approved by the National Safety Council, Inc.*

1 Be sure the gear shift lever is in neutral before cranking the engine.

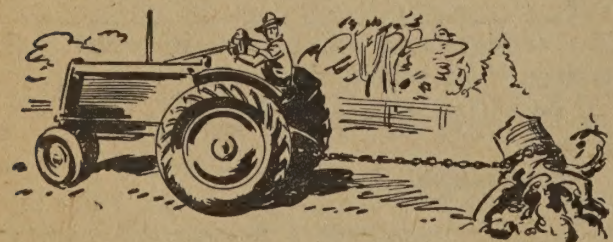
2 Always engage the clutch gently, especially when going up a hill or pulling out of a ditch.



3 When driving on highways, or to and from fields, be sure that both wheels are braked simultaneously when making an emergency stop.

4 Always ride on seat or stand on platform of tractor. Never ride on drawbar of tractor or drawn implement.

5 When tractor is hitched to a stump or heavy load, always hitch to drawbar and never take up the slack of chain with a jerk.



6 Be extra careful when working on hillsides. Watch out for holes or ditches into which a wheel may drop and cause tractor to overturn.

7 Always keep tractor in gear when going down steep hills or grades.

8 Always drive tractor at speeds slow enough to insure safety, especially over rough ground or near ditches.

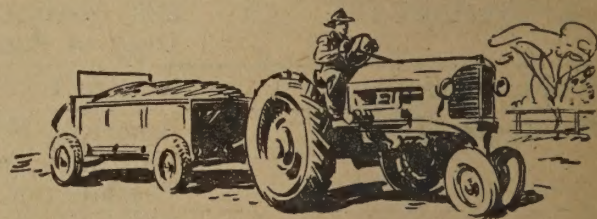
9 Reduce speed before making a turn or applying brakes. The hazard of overturning the tractor increases four times when speed is doubled.

10 Always stop power take-off before dismounting from tractor.

11 Never dismount from tractor when it is in motion. Wait until it stops.

12 Never permit persons other than the driver to ride on tractor when it is in operation.

13 Never stand between tractor and drawn implement when hitching. Use an iron hook to handle drawbar.



14 Do not put on or remove belt from belt pulley while the pulley is in motion.

15 Should motor overheat, be careful when refilling radiator.

16 Never refuel tractor while motor is running or extremely hot.

17 When tractor is attached to a power implement be sure that all power line shielding is in place.



**Remember a CAREFUL OPERATOR always is
the BEST INSURANCE against an accident**

Care of Farm

Machinery

Moisture is the greatest enemy of farm machinery. In time it destroys paint, rusts and pits metal, warps wood, rots canvas and leather. It makes machines pull hard, makes moving parts bind, causes breaks and delays.

The first protection against moisture is proper housing. On well managed farms, all machinery is kept in sheds when not in use. If it is impractical to house machinery every night, it can be covered with canvas or even old sacks sewed together, as a protection against rain or dew. Plow bottoms or other scouring parts should be greased when left in the open. You can use old crank case oil for this. Certainly leaving machinery exposed to weather the year around is the worst kind of economy.

If no sheds are available, they can be built at small cost. On most farms there is enough waste lumber to erect the main parts of a shed. Tar paper or sheet metal, can be used in place of siding, if the latter is too expensive. A good width for a shed is 26 feet, which will house the average threshing machine. The shed can be built in 12 or 14 foot sections, so that other sections can be added later, if necessary. Inside posts should not be used and plenty of space allowed so that any machine can be taken out quickly.

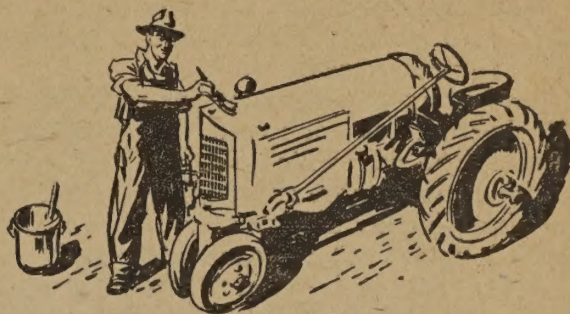


Be sure the shed includes a tool bench and keep the tools on the bench. Tools should include a supply of various sized nuts, bolts and cotter pins, as well as extra knives, spare parts and lubricants.

A small investment in tools and parts will permit you to make prompt repairs, saving days of vital time. Machines should be promptly repaired or adjusted at the first sign of being out of order. Running them in poor condition may result in considerable damage. Go over machines periodically while in use and tighten up or

replace all nuts, bolts and cotter pins.

The advantage of a properly equipped machinery shed is that repair and upkeep work can be done at any time. When the season's work is over, make a list of necessary repairs and adjustments. Get any repair parts necessary at once and do the work during the winter.



Repaint, where necessary, all painted metal parts. Do not paint over rust, or you will waste both time and paint. Remove rust with emery cloth or steel wool. Clean all bright metal parts and coat them with grease. Thoroughly lubricate the entire machine, filling oil and grease cups.

When machines are placed in the shed for the winter, put boards under the metal wheels, if there is no floor. If wheels have rubber tires, we suggest that the machine be jacked up. Oil and grease are the natural enemies of rubber and should be washed off with gasoline. This applies to tires and all other rubber parts.

Place a block or support under the center of tongues or other long wooden parts to prevent sag. If paint has come off wooden parts, repaint them. The color of the paint does not matter, but the quality does. Good paint goes farther, lasts longer and really protects against decay. For unpainted wooden parts, such as rollers, apply warm, raw linseed oil.

Remove any canvas parts, wrap them and hang in dry place, away from rats or mice. Likewise, remove and store leather parts, after applying harness dressing, castor oil or tallow. Never use machine oil on leather.

When putting up motorized equipment, drain the cooling system and lubricate thoroughly. Do not drain engine oil, but change before starting the motor again. Remove all storage or dry batteries and place in a cool dry spot. Add water to storage batteries monthly when not in use.

Best Methods of Farm *Painting*

The wise farmer keeps his buildings and equipment well painted at all times. He has found that a little money spent for paint saves spending a lot of money for repairs. Paint makes his farm neater, more attractive and more saleable.

Choosing Paint

Modern professional painters do not mix their own paint. They buy ready-mixed paint for many reasons.

Ready-mixed paint contains many desirable ingredients not available to the farm painter who mixes his own. It is mixed by machine much more thoroughly than it can be mixed by hand. It is available in any desired color and in cans of exactly the quantity required. And there is a paint made for every purpose, from painting wood, metal, concrete and composition roofing, to paints that are heat-reflecting, luminous, or rust resisting.

Ready-mixed paint costs more than home mixed paint but it usually lasts longer. In buying it, it is wise to select the paint of a reputable maker. Buy no more than necessary for the job. If any remains, pour it into the smallest can or jar which will hold it and seal tightly. Small amounts of paint left in large containers will harden, even if sealed.

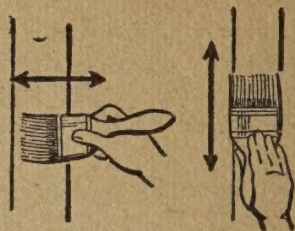
Prepared paint should be mixed thoroughly. This is best done by pouring the top third into another container, mixing the remainder and then pouring the top part back slowly, while mixing. Then pour the paint from one container to the other two or three times, stirring vigorously.

Prepare Surface Well

Proper preparation of the surfaces to be painted makes paint stay on longer. All surfaces should be dry, free from dirt, dust, grease, pitch or rust.

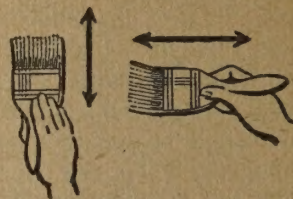
Spots, streaks or knots showing resin or pitch in new wood should be coated with orange shellac. If whole boards are resinous, as with yellow pine, they should be brushed with turpentine immediately before painting.

In repainting building exteriors all loose paint should be removed with a wire brush or scraper. If paint is badly checked it should be softened with a blowtorch and scraped off. Loose putty should be removed and fresh putty applied in all holes, joints or cracks.



On narrow surfaces, apply paint across and smooth lengthwise with the brush edge.

Brush paint out both ways, with final strokes following the grain of the wood.

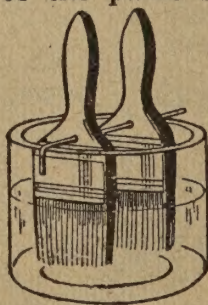


Brushes and Their Use

Choose good brushes, use them properly for their intended purposes, care for them well and they will make painting easier and they'll last a long time.

For the exterior painting of large surfaces, the largest brush that can be handled without undue fatigue, about 4" usually, will get the paint on quickest. Smaller brushes should be available for trim, sash, etc.

Paint should not be allowed to dry on brushes. After use they should be washed in turpentine, mineral spirits or the solvent of the paint being used, then with soap and water and dried well before storing.



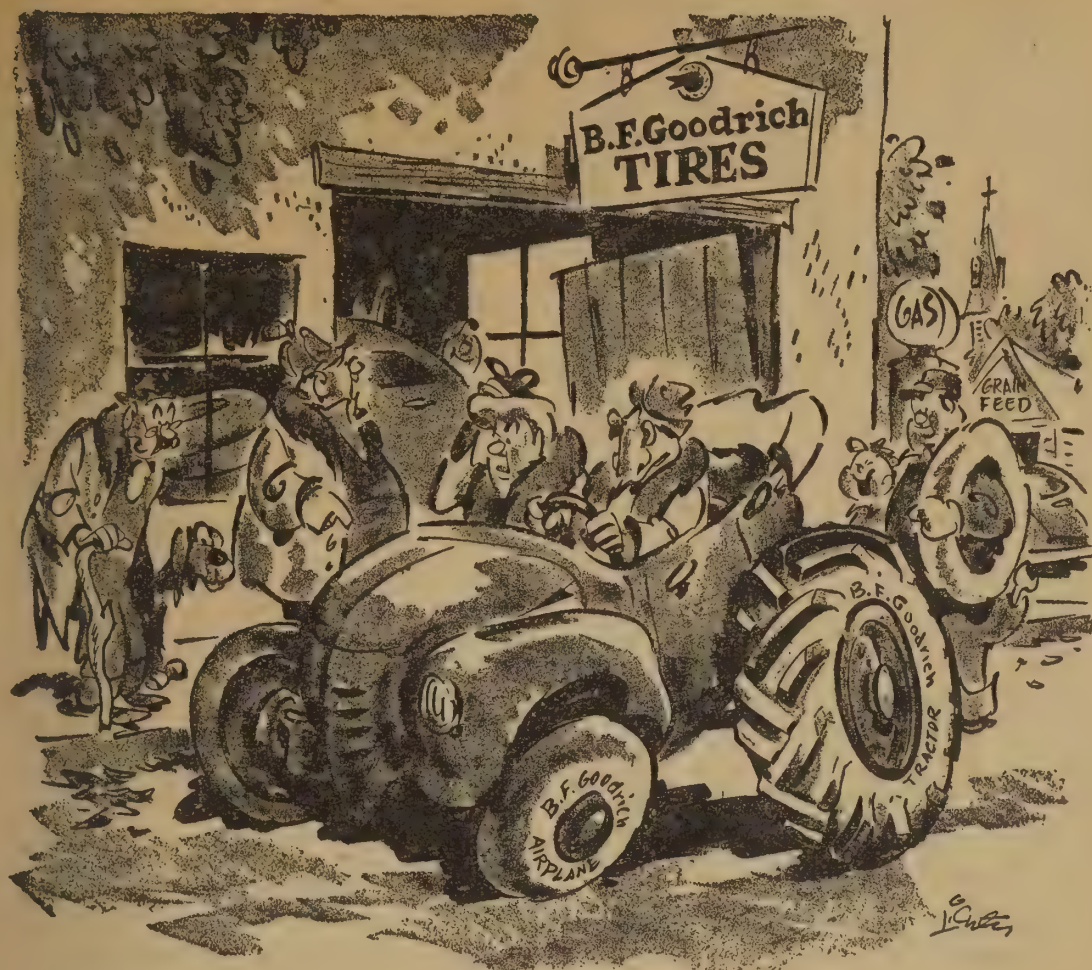
If brushes are to be re-used soon, they may be suspended in linseed oil, turpentine, mineral spirits or kerosene. Before using them again wipe them as clean as possible. Do not keep brushes in water.

Applying Paint

Do not try to put too much paint on brush. One-third brushful at a time is ample, and less should be used on overhead surfaces.

It is best to paint outside surfaces from the top down wherever possible. Brush the paint out to a thin coat, working with the grain of the wood.

Do not apply too thick a coat. It may run. Two or three thin coats will look better and last longer than one thick coat.



"NEVER MIND HOW THEY LOOK — WE'RE LUCKY THEY'RE ALL B.F. GOODRICH TIRES!"

Facts about Snakes

Most boys, and many men, will kill every snake they see. This unreasoning action is largely due to fear and superstition. There is hardly another living thing about which more tall tales are told than the snake.

The hoop snake, for instance, is falsely accused of putting its tail in its mouth and rolling down hill to strike a person at the bottom. Or of impelling its tail into a tree and killing the tree.

Equally untrue is the widely held belief that a milk snake can milk a cow. The cow wouldn't permit it, even if the snake could do it.

The hissing of a snake is no more poisonous than the hissing of a gander. Snakes do not sting with their tongues, which are only delicate feelers. They strike with their fangs, which may or may not be poison containing.

As a matter of fact, all snakes, even poisonous ones, are the farmer's friends. The

larger varieties destroy rats, mice, ground squirrels, etc. Smaller snakes eat worms and insects. A few of the larger ones may eat birds, frogs and fish.

There is no simple method of distinguishing poisonous and harmless snakes. There are about 40 varieties of harmless snakes in this country and only 17 species which are dangerous. Of these poisonous snakes only about half a dozen kinds are known to strike human beings.

Any snake bite should be treated without waiting a single second longer than necessary. Accepted first aid today consists of a tourniquet to reduce the flow of blood toward the heart, and a small incision at the bite from which the poisoned blood may be sucked. If there are poisonous snakes near your farm it would be wise to memorize complete details of this treatment, which you can obtain from any good home medical or first aid book or from your family doctor.

Ideas for the Farm Handyman

To work with both hands, our fruit pickers use canvas sacks suspended on straps around their necks. I had my wife sew zippers (the kind the dime stores sell for use on women's clothes) across the sack bottoms. Thus the sacks do not have to be taken off to empty. Also there is less tendency to bruise the fruit when emptying the sack.

—P. D., New York

I use the "walking yard stick" illustrated to measure fields, place rows, etc. It can be made quickly from light pine strips or lathe. It will measure distances from 6 inches to 6 feet. In use, the top is held in one hand and rotated, so the points fall one ahead of the other as you walk. The adjustment holes on the cross bar can be marked with the measurements they make.

—W. C. T., Idaho

I wanted to renovate some old window sash for use in my barn but found that the putty had become so hard it was impossible to remove without breaking the glass. Remembering something about heating it, I tried an electric soldering iron. This softens the putty quickly and makes it easy to remove.

—J. R. Jr., Kentucky

Chickens will insist upon drowning in large tanks. We stopped this trouble by placing a small board afloat in our tank. The chickens climb on this board and are able to save themselves.

—G. H. S. Jr., Wisconsin

To waterproof shoes, use a mixture of one pint tallow, one pint neatsfoot oil, $\frac{1}{2}$ teacup of lampblack, and a piece of rosin the size of a walnut. Melt it all together and apply all the leather will absorb while warm. One application every two weeks will keep the shoes waterproof.

—N. B. O., Michigan

The drawers in furniture or work benches often get so they won't slide easily. I tried oil and grease but these made them stick worse. Then I tried soap flakes. This makes them slide like a charm.

—R. de V., Illinois

Sometimes it is difficult to cut tarred roofing because it will stick to the knife blade. I find that by frequently dipping the blade into a small can of kerosene this trouble is prevented.

—H. V., Wisconsin

I have found that my milk cans last much longer when I paint the bottom with a good implement paint. Rust usually starts in this place.

—R. S., Pennsylvania

I find that the quickest way to remove old wall paper is to soak it thoroughly with a solution of warm water and sal soda. This can be applied quickly with an insect spray gun. After it has soaked in, the paper peels off readily. Sticky spots can be quickly removed with a broad putty knife.

—Mrs. W. R., California

My axe handles wear out very quickly when I am splitting wood. To protect them, the handles are tightly wrapped with fine wire for about three inches from the point where they enter the axe heads.

—J. M. W., Minnesota



The plan shown in the diagram keeps hogs from fighting and crowding at the feeding trough. It consists

of 2 x 4 boards, rounded and smoothed and firmly nailed across the top of the trough. The boards are long enough so the hogs must get between them to reach the trough and close enough together so only one hog can enter. The trough should be firmly anchored or weighted.

—G. P. S., Iowa

Facts about Silos and Silage

A Silo Will —

- give 25 to 30% more feeding value to the corn crop than when it is fed as dry fodder.
- store about 2½ times as many pounds of nutrients in the same space as a mow.
- provide the cheapest form of succulent feed, considering yield per acre and labor required.
- increase the livestock carrying capacity of the farm.
- permit a reduction in the amount of grain fed.
- provide food having a beneficial effect on the digestive system.
- prevent waste and save labor.

A Silo Should —

- have airtight walls to prevent spoilage.
- be cylindrical in shape if possible. Cylindrical silos take less material to build and are easier to pack than a silo with corners.
- be as high as possible, within reason, at least twice its diameter. In high silos the silage packs better, reducing losses by spoilage.
- have smooth inside walls to prevent air pockets when filling.
- have tight fitting and convenient doors.
- be carefully planned to meet the needs of present and prospective livestock.

Relation of Size of Silo to Length of Feeding Period and Size of Herd

No. Cows consuming 40 pounds of silage daily	FEED FOR 180 DAYS				FEED FOR 240 DAYS			
	Est'd Amount Silage consumed (tons)	Size of Silo		Est'd Amount Silage consumed (tons)	Size of Silo			
		Diam. (feet)	Hgt. (feet)		Diam. (feet)	Hgt. (feet)		
10	36	10	25	48	10	31		
12	43	10	28	57	10	35		
15	54	11	29	72	11	36		
20	72	12	32	96	12	39		
25	90	13	33	120	13	40		
30	108	14	34	144	15	37		
35	126	15	34	168	16	38		
40	144	16	35	192	17	39		
45	162	16	37	216	18	39		
50	180	17	37	240	19	39		

An Added Silo

Sometimes it becomes necessary to build another and larger silo. If summer feeding is done, the smaller silo can be reserved for warm weather use. This permits feeding off to a greater depth, thus helping to prevent spoilage.



Approximate Capacity of Cylindrical Silos

Depth of Silage After Settling	INSIDE DIAMETER					
	10'	12'	14'	16'	18'	20'
	Tons of Silage	Tons of Silage	Tons of Silage	Tons of Silage	Tons of Silage	Tons of Silage
26	37	54	74	97	122	151
28	42	61	83	108	137	169
30	47	67	91	119	151	187
32	51	74	100	131	166	205
34	56	80	109	143	181	224
36	61	87	118	155	196	242
40	70	101	138	180	229	280

Suitable Silage Crops

Corn—Probably 90% of all silage is corn. Slow maturing varieties best. Should be harvested in glazed stage. Best when moist enough to pack with little water.

Sorghums—Harvest when seed is hard. Cut finely to remove air.

Legumes—Harvest in hay time. Usually best mixed with corn or sorghums because of low sugar content.

Small Grains—Harvest when kernels are passing into dough stage. Better than legumes but inferior to corn or sorghums. Cut finely and pack well.

Peas and Oats or Vetch and Wheat—Plant together and harvest when oats or wheat are passing into dough stage.

Beet Tops—Put into silo promptly after beets are topped. Harvest as clean as possible and place straw at bottom of silo to absorb excess moisture.

Soy Beans—Usually sown with corn or sorghums and harvested at same time. Excellent to increase protein content of silage.

Sunflowers—Generally used where corn growing season is too short. Harvest before seeds develop. Good feeding value if properly harvested and packed.

SPEAKING OF TRACTION

—by Fontaine Fox



NEWS ITEM—THE WORST TWISTER IN 30 YEARS PASSED THRU EAST TOONERVILLE YESTERDAY

Rubber Tires vs. Steel Wheels

Carefully kept records over a period of years prove that farmers who have rubber tires on their tractors and implements enjoy more advantages than farmers who work on steel wheels. Of benefits gained, perhaps the most important is the saving in time. More work can be done per day because rubber-tired tractors cut down substantially the time required for plowing, cultivating, harvesting—work in which time is very often the vital element. Tests have shown that rubber tires save as much as 24 days a year for each 150 acres worked.

Factual evidence in impartial reports made by nearly 200 Iowa farmers on their experience with tractor tires shows an average saving in time of 23%, an average fuel cost cut of 22%, a minimum average of 7 years' service per set, and very low maintenance. In addition to these reports, experiences on all types of farms across the country show that the speed and extra power provided by rubber-tired trac-

tors, plus the greater ease of operation frequently means the difference between hiring or not hiring extra help.

Another advantage resulting from rubber-tired tractors is that less power is needed to operate them than is required for steel wheels. Frequently a tractor with rubber tires can work in soil entirely unsuited to steel lugs, making profitable use of land that otherwise might lie idle. It has been proved many times that tires on tractors and implements eliminate the damage to crops frequently caused through cultivating with steel-lugged equipment.

Comparison of Rubber Tires vs. Steel Wheels on working 150 acres

	Steel	Rubber
Hours work per year	1300	1063
Number of 10-hour days	130	106
Hours per acre required	8.7	7.1
Gallons of fuel used	1950	1275
Gals. of fuel used per hour	1.5	1.2
Cost of fuel used	\$195.00	\$127.50

Making Farm Equipment with Concrete

Successful concrete construction is easy if three essential rules are followed.

1. *Use good materials.* Cement is cheap, so use the best. Be sure there is no considerable amount of loam or vegetable matter in the sand or aggregate. Screen all sand and aggregate carefully.

2. *Proportion and mix correctly.* Follow the table at the bottom of the page. This gives proportion by volume. Mix dry materials to an even color first. Then add water. For work in forms, use a mixture as damp as wet earth. For thin, reinforced sections use a slowly flowing mixture. For other work use a mixture between the two. Tamp well after placing.

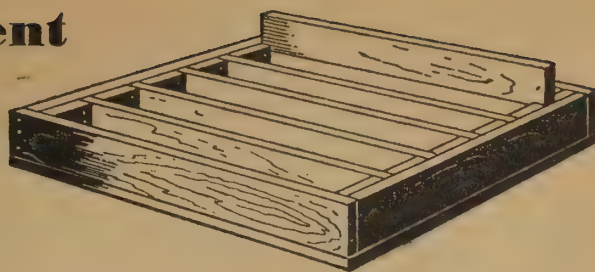
3. *Cure well.* Concrete hardens by chemical action, not by drying. Prevent too rapid drying by covering with old sacks, moist earth, hay or straw (not manure). Sprinkle the covering with water occasionally for a week or ten days.

Concrete in Forms

By using wooden forms, it is possible to make water troughs, cisterns, tanks, culverts, fence posts, etc. On underground construction, the earth serves as one side of the form, unless too sandy to hold. Otherwise both sides of the form must be constructed.

Green lumber is best for forms, but any lumber should be of even thickness and smooth on one side. Construct forms smooth on the inside and sturdy on the outside. Concrete weighs 130 to 150 pounds per cubic foot.

The form illustrated can be adapted for light troughs, tanks and so on. It is filled



Multiple fence post form and (below) form for light trough.



bottom up and turned over after curing. Troughs or tanks too heavy to move should be formed in their exact location.

Reinforce heavy troughs or tanks with steel rods or bars the full length and width of the piece. On lighter work, chicken netting is excellent for reinforcing.

Fence posts can be made rapidly by using several of the multiple forms shown. The height and thickness of these forms depends on the size of fence posts desired. The width should not be so great as to prevent easy handling.

Fence posts should have reinforcing rods placed about one inch inside each corner. One or two rods may also be placed in the center, if desired. Wires for attaching fence wire may be twisted on one of the rods and allowed to protrude from the face of the form. Or fence wire may be fastened to the post with loops.

Concrete can be removed from forms easily if the form is first greased with oil and graphite, or linseed oil and turpentine. This must be done before each use of any form used repeatedly.

On thin work, leave forms in place one week to ten days. Heavy concrete should have up to one month in the forms for proper curing.

Concrete Mixtures

Use of Concrete	Cement cu. ft. (sacks)	Sand cu. ft. ($\frac{1}{4}$ " screen)	Aggregate cu. ft.	Maximum size of aggregate
Thin sections — fence posts, ornamental work, cooling tanks.....	1	2	2	$\frac{3}{4}$ "
Watertight work — cisterns, water tanks and troughs, silos, floors.....	1	2	3	1"
General work — pavements, basement walls, culverts, pits.....	1	$2\frac{1}{2}$	$3\frac{1}{2}$	$1\frac{1}{2}$ "
Mass work — footings, foundations which need not be watertight.....	1	3	5	2"

Here's How B. F. Goodrich Tires

Make Farm Work *Easier*

By H. W. Delzell, Field Engineer, Farm Service Tires, The B. F. Goodrich Co.



Delzell

After you have read this article by Mr. Delzell you will be a better informed person about *tire traction* than 99 per cent of men outside of the rubber industry itself. Every statement here is conservative and factual. If you should at any time wish an authoritative answer to any question about tire traction, construction or wear, you may write to Mr. Delzell and will receive a personal reply.

Address: H. W. Delzell, Field Engineer, Farm Service Tires, Dept. 6165, The B. F. Goodrich Company, Akron, Ohio.

Nearly all of you tractor owners who read this know something about machinery. You know, without even stopping to think about it, that the more traction your tires give you, the less they slip, providing a steadier pull, which means you can do more work in the same amount of time, and with less fuel consumption.

You also know at a glance that all tires aren't the same. Some have bars; some have buttons; some have tricky combinations of both. Which kind is best?

Well, finding out about that is just like studying any machine. Look at a B. F.

Goodrich tread. It's better to study the tire itself, but if you don't have one, look at the picture on the opposite page.

Cleats Designed in Pairs

High cleats, of course. But note that those cleats are *in pairs*. One is long and one short; then there's another long and short on the opposite side. The *long* cleat crosses the center; the short one is a *shoulder* cleat. (See illustration below).

Now this is just a matter of ordinary mechanics. Notice the cleats are not connected with each other. This allows the cleats to push down into the soil easier and deeper, and to cut through cover crops. You don't have to be an engineer to see the advantage of that. You get a firm, even grip from shoulder to shoulder. At the same time the tread is open and self-cleaning. You get in this tire all the advantages of self-cleaning tread plus the added advantages of deep bite and even grip. If you have any question whether that makes a better pulling tire and speeds up tractor operation, ask anyone who uses B. F. Goodrich tires.



(Cont'd on page 18)

**Note;
PAIRED
CLEATS**



Without these B. F. Goodrich features you may still get good tires. They may wear well, may keep your tractor operating smoothly year after year. But, if you *do not* have the B. F. Goodrich tread your work is bound to be just a little slower; you'll lose a little more time whenever you have a hard pull; and you may have to add more *weight* to get the same traction you'd have with B. F. Goodrich tires. (More weight increases the traction of any tire, but the *less weight* you add the less power it takes to carry the weight around your fields. That's one way B. F. Goodrich tires save you money.)

Users can tell you

Read on page 40 what some farmers say about these B. F. Goodrich features. Every one of those comments is a sincere, voluntary expression written to The B. F. Goodrich Company by a successful farmer and tractor owner. Most of these farmers have said they invite other farmers to write them about their experience with B. F. Goodrich tires if they wish.

How B. F. Goodrich studied farmers' problems

Now here are some extra facts for the "farmer engineer," or anyone who has

made a special study or hobby of mechanics. Look at the curve at the end of the cleat (marked A in the picture shown below) and the curve marked B in the cross-section picture, page 19, at the side of the cleat.

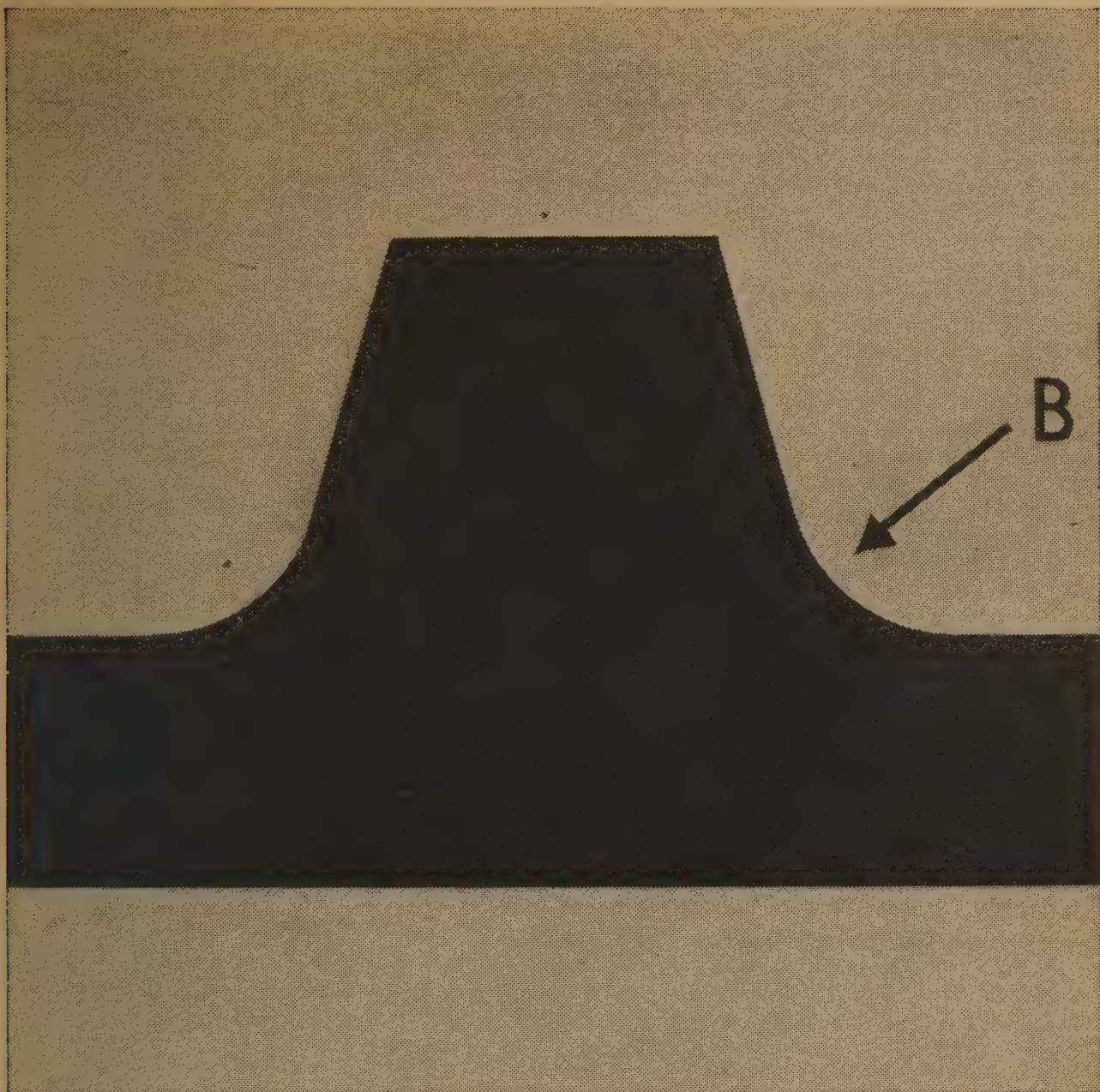
Those "cleats" were designed scientifically as the result of hundreds of experiments. Farmers and technical rubber men worked together. Tires with different tread designs were made and tested under all kinds of farm conditions. When the right tread design was found, here's what we had: cleats that would give deep penetration and yet were strong enough so they wouldn't tear off or crack at the bottom. That was the problem — *bite* without *strain*. Only by studying the farmers' own problems could we get *bite* in a tread and still have tires that would *wear for years*.

Height of Cleats Important

Another point: The height of the cleats on B. F. Goodrich tires has been determined to the hundredth of an inch. It was done through those same experiments with farmers and rubber experts working together. Cleats must not be so high as to bend over, because that would reduce the depth of the penetration. They must be wide enough to give strength, but not too wide, because if they were too wide, it would reduce the depth of the bite. It's the same with *direction* of cleats. They mustn't run lengthwise too much. That would reduce the *pull*. They mustn't run crosswise too much because they wouldn't clean as easily. Packed mud or dirt would reduce the traction. And the cleats must be spaced just the right distance apart for maximum traction.

After study and development work like this is it any





wonder that B. F. Goodrich tires have extra traction? Is it any wonder that you can do your work faster and cheaper when your tractor has B. F. Goodrich tires?

How about synthetic rubber?

All tractor tires are now made of synthetic rubber, and B. F. Goodrich has had more experience with synthetic rubber than any other tire manufacturer.

B. F. Goodrich made and sold auto tires containing synthetic rubber three full years before any other company, and also made the first *tractor* tires with synthetic rubber. That *extra* experience means you get a better, longer lasting tire when you buy a B. F. Goodrich Silvertown.

More information

The B. F. Goodrich dealer whose name is printed on the back of this book is especially interested in *tractor tires*. He and his men have special knowledge about them too. They can give you or get for you the answers to any questions, help you settle arguments or even get technical information if you want it. They give you *complete* tractor-tire service, help you get the most out of your tires and out of your tractor itself.

Make their store your headquarters when in town. You're welcome to drop in for minutes or hours, summer or winter. Please take this as AN INVITATION from men who want to be your good friends — your B. F. Goodrich dealer.

SPEAKING OF TRACTION

—by Fontaine Fox



Recommended Air Pressures for Tractor Tires

Front Tires — All Sizes

1-4 Ply Tires.....28 lbs. 2-6 Ply Tires.....36 lbs.

Rear Tires — All Sizes*

3—Minimum Inflation Pressure12 lbs.

4—When plowing, increase pressure in tire on furrow wheel by 4 lbs.

5—When special heavy wheels are used, or heavy implements such as corn pickers, bedders, etc., are carried on the tractor, inflation pressure must be increased. See Tire and Rim Association schedule or contact the tractor dealer or manufacturer.

Adopted by Tire & Rim Association

**Exceptions are the small section dual tires which require a minimum of 20 pounds per sq. in.*

Recommended Air Pressures for Implement Tires

TIRE SIZE All Rim Diameters	AIR PRESSURE (Lbs)			
	4 Ply	6 Ply	8 Ply	10 Ply
3.00	44			
3.50	40	48		
4.00	36	48		
5.00, 5.50	32	44		
6.00, 6.50, 7.00	28	40	56	
7.50, 8.25	24	36	48	
9.00	20	32	44	56
11.25		28	36	44
12.75		24	32	

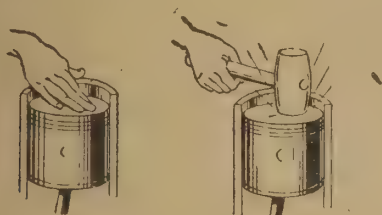
More Miles from Wartime Gasoline

The quality of civilian wartime gasoline has been lowered to give our fighting men the best there is. All of us should accept this necessity gladly. And, if we change a few of our driving habits, we can make wartime gasoline perform quite well, in spite of its inferior quality.

Take It Easier

Wartime gasoline has less power. If we try to make our motors do what they did with high octane gasoline, we strain them needlessly, may damage them.

So the first rule of wartime driving is, "Take it easier." We should not try to make jack-rabbit starts. We should use lower gears in climbing hills. We should never make our motor work so hard it knocks.



Proper gasoline combustion pushes the piston down.

A knocking explosion is like hitting the piston with a hammer.

Don't Permit Knocking

Spark knock or ping is much more common with wartime gasoline. This is particularly true with recent model cars which were built with high-compression motor heads, designed to use high test gasoline.

Spark knock is caused by improper combustion of the gasoline and air charge. Instead of burning evenly, part of the charge explodes, giving the piston a heavy blow, instead of a steady push.

Nobody would take the head from their motor and hit the pistons with a hammer.

Yet this is exactly what happens with spark knock. The explosive blows are transmitted to connecting rods and crankshaft, straining them and causing unnecessary bearing wear. Such knocking may also crack spark plugs or blow head gaskets, causing considerable inconvenience.

When spark knock is due entirely to lower quality gasoline, the only preventative is to ease up on the accelerator or shift gears. And that is what we should do as soon as knocking is heard.

Look for Other Causes, Too

Spark knocking should not be attributed to gasoline until other possible causes are investigated. Many motorists, particularly those who traded their cars in often, do not realize that an older car needs regular and frequent checking so that worn parts may be adjusted or replaced.

A worn distributor, or timer, is a frequent cause of spark knock. Parts may be worn or weakened, or the vacuum line stopped up or leaking. Such defects cause improper functioning and result in spark knock. They should be corrected. It is not recommended, however, that the distributor be reset to prevent low-test fuel knocking.

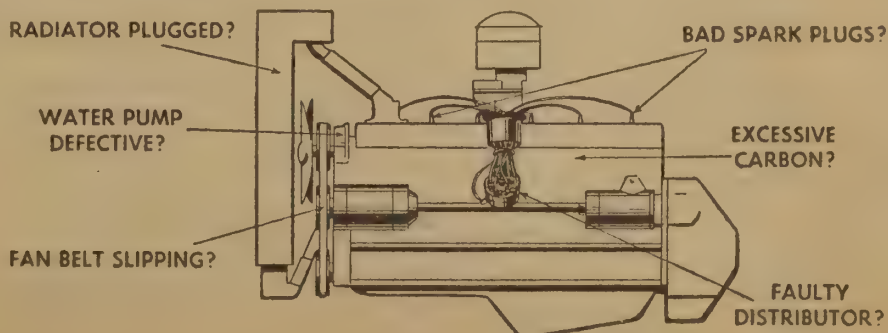
Incorrect or faulty spark plugs may also cause spark knock. So may high motor temperatures resulting from a clogged or leaking cooling system or defective fan belt or water pump. The same is true if there are excessive carbon deposits in the cylinder heads.

Don't Overload Your Motor

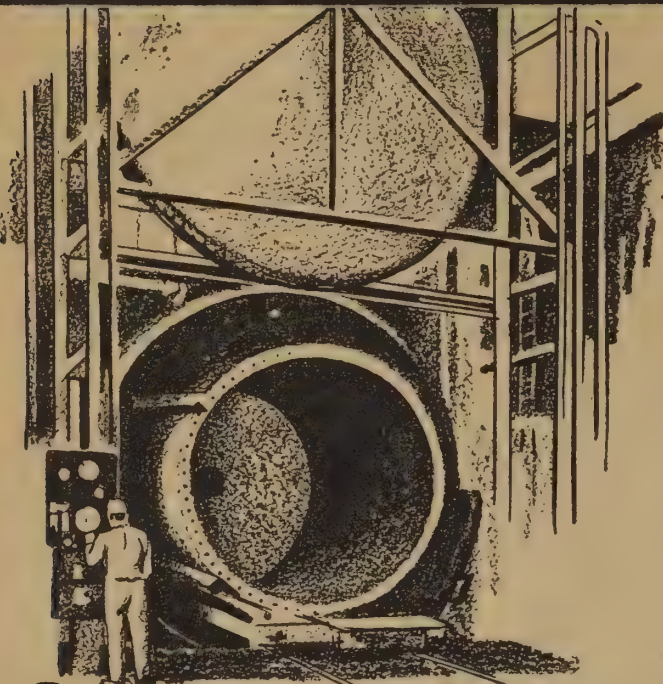
Making motors pull unnecessary loads wears them out faster and wastes precious gasoline.

Make sure that your car is properly lubricated and that all parts function smoothly and easily. This is particularly true of running gear, transmission, differential, brakes, etc.

Check these points for possible causes of improper gasoline combustion (spark knock).



Rubberoddities-



GIANT BAKE OVEN

BIG ENOUGH TO HOLD A RAILROAD CAR, THIS OVEN IS USED BY B.F. GOODRICH TO VULCANIZE RUBBER LININGS TO INSIDE OF TANK CARS. "OVEN-DOOR" ALONE WEIGHS 90 TONS.



RAIL CUSHION...

RUBBER PAD, MADE BY B.F. GOODRICH, IS INSERTED IN THE TIE PLATE BETWEEN STEEL RAILS AND WOODEN TIES AND CARRIES ENTIRE WEIGHT OF TRAIN. BRINGS NEW SMOOTHNESS TO RIDING.

TIRES from DANDELIONS



B.F. GOODRICH HAS EVEN MADE TIRES FROM RUBBER SECURED FROM RUSSIAN TYPE DANDELIONS - "KOK-SAGHYZ"

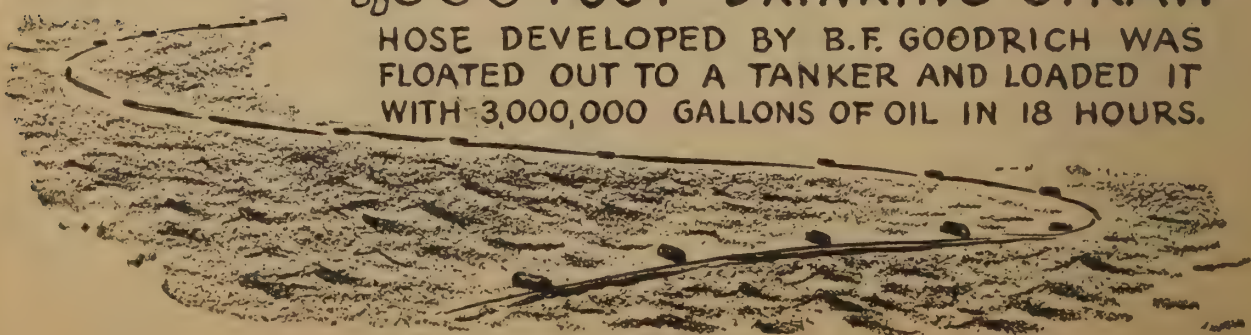
CAN'T GO FLAT

THIS B.F. GOODRICH WHEELBARROW TIRE HAS A HOLLOW AIR CENTER BUT REQUIRES NO INFLATION.



1,000 FOOT DRINKING "STRAW"

HOSE DEVELOPED BY B.F. GOODRICH WAS FLOATED OUT TO A TANKER AND LOADED IT WITH 3,000,000 GALLONS OF OIL IN 18 HOURS.



Gestation Table

The probable date of birth of the common farm animals listed below may vary a few days. The gestation period of cats varies from 56 to 63 days. The table shows 63 days, the same as for dogs.

DATE OF SERVICE	SOW	EWE	COW	MARE	DOGS OR CATS
Jan. 1	April 25	May 31	Oct. 8	Dec. 7	March 3
Jan. 8	May 2	June 7	Oct. 15	Dec. 14	March 10
Jan. 15	May 9	June 14	Oct. 22	Dec. 21	March 17
Jan. 22	May 16	June 21	Oct. 29	Dec. 28	March 24
Jan. 29	May 23	June 28	Nov. 5	Jan. 4	March 31
Feb. 5	May 30	July 5	Nov. 12	Jan. 11	April 7
Feb. 12	June 6	July 12	Nov. 19	Jan. 18	April 14
Feb. 19	June 13	July 19	Nov. 26	Jan. 25	April 21
Feb. 26	June 20	July 26	Dec. 3	Feb. 1	April 28
March 5	June 27	Aug. 2	Dec. 10	Feb. 8	May 5
March 12	July 4	Aug. 9	Dec. 17	Feb. 15	May 12
March 19	July 11	Aug. 16	Dec. 24	Feb. 22	May 19
March 26	July 18	Aug. 23	Dec. 31	Feb. 29	May 26
April 2	July 25	Aug. 30	Jan. 7	March 8	June 2
April 9	Aug. 1	Sept. 6	Jan. 14	March 15	June 9
April 16	Aug. 8	Sept. 13	Jan. 21	March 22	June 16
April 23	Aug. 15	Sept. 20	Jan. 28	March 29	June 23
April 30	Aug. 22	Sept. 27	Feb. 4	April 5	June 30
May 7	Aug. 29	Oct. 4	Feb. 11	April 12	July 7
May 14	Sept. 5	Oct. 11	Feb. 18	April 19	July 14
May 21	Sept. 12	Oct. 18	Feb. 25	April 26	July 21
May 28	Sept. 19	Oct. 25	March 4	May 3	July 28
June 4	Sept. 26	Nov. 1	March 11	May 10	Aug. 4
June 11	Oct. 3	Nov. 8	March 18	May 17	Aug. 11
June 18	Oct. 10	Nov. 15	March 25	May 24	Aug. 18
June 25	Oct. 17	Nov. 22	April 1	May 31	Aug. 25
July 2	Oct. 24	Nov. 29	April 8	June 7	Sept. 1
July 9	Oct. 31	Dec. 6	April 15	June 14	Sept. 8
July 16	Nov. 7	Dec. 13	April 22	June 21	Sept. 15
July 23	Nov. 14	Dec. 20	April 29	June 28	Sept. 22
July 30	Nov. 21	Dec. 27	May 6	July 5	Sept. 29
Aug. 6	Nov. 28	Jan. 3	May 13	July 12	Oct. 6
Aug. 13	Dec. 5	Jan 10	May 20	July 19	Oct. 13
Aug. 20	Dec. 12	Jan. 17	May 27	July 26	Oct. 20
Aug. 27	Dec. 19	Jan. 24	June 3	Aug. 2	Oct. 27
Sept. 3	Dec. 26	Jan. 31	June 10	Aug. 9	Nov. 3
Sept. 10	Jan. 2	Feb. 7	June 17	Aug. 16	Nov. 10
Sept. 17	Jan. 9	Feb. 14	June 24	Aug. 23	Nov. 17
Sept. 24	Jan. 16	Feb. 21	July 1	Aug. 30	Nov. 24
Oct. 1	Jan. 23	Feb. 28	July 8	Sept. 6	Dec. 1
Oct. 8	Jan. 30	March 7	July 15	Sept. 13	Dec. 8
Oct. 15	Feb. 6	March 14	July 22	Sept. 20	Dec. 15
Oct. 22	Feb. 13	March 21	July 29	Sept. 27	Dec. 22
Oct. 29	Feb. 20	March 28	Aug. 5	Oct. 4	Dec. 29
Nov. 5	Feb. 27	April 4	Aug. 12	Oct. 11	Jan. 5
Nov. 12	March 6	April 11	Aug. 19	Oct. 18	Jan. 12
Nov. 19	March 13	April 18	Aug. 26	Oct. 25	Jan. 19
Nov. 26	March 20	April 25	Sept. 2	Nov. 1	Jan. 26
Dec. 3	March 27	May 2	Sept. 9	Nov. 8	Feb. 2
Dec. 10	April 3	May 9	Sept. 16	Nov. 15	Feb. 9
Dec. 17	April 10	May 16	Sept. 23	Nov. 22	Feb. 16
Dec. 24	April 17	May 23	Sept. 30	Nov. 29	Feb. 23

Preparing Food for

Frozen Storage

Frozen storage is becoming more and more popular in all parts of the country. Many farm homes have their own frozen storage units and many other farmers rent lockers in nearby refrigerator plants.

Principles of Food Preparation

In general, preparing food for frozen storage involves two simple principles:

- 1. Selecting for quality, cleaning and separating into suitable units.
- 2. Packing, wrapping and sealing in vapor-proof packages.

Meats, Poultry, Fish

Farm slaughtered meat should be aged properly at a temperature of 32° to 40°. Before freezing, bruised or unsound parts should be discarded and the meat should be cut into "family meal" sizes, with as much bone as possible removed. Sausage or meat patties should be stored without seasoning.



Meat is usually wrapped in vapor-proof cellophane or locker paper. Ample paper should be used and the ends taped, tied or sealed. The piece is then placed in a stockinette or wrapped in cheese cloth to reduce the possibility of damage.

Poultry should be thoroughly cleaned be-

fore freezing, then cut up as broiler, fryer or roaster and packaged in the same manner as meat.

Fish and sea food can be frozen stored by following the same rules as for meat.

Meats, poultry and fish need not be thawed before cooking, but should be cooked slowly. However, many persons believe that thawing prevents loss of juices. Thawing should take several hours, in a refrigerator or cold room.

Fruit

Only firm, fully ripe, unblemished fruit should be selected. It must be prepared, packed and sealed without delay. Apples, peaches and pears should be protected against discoloration by dropping, as soon as sliced, into a solution of 1 tablespoon lemon juice, or salt, to a quart of water.

All fruits should be frozen with sugar added. Most fruits retain shape best in syrup but dry sugar may be used with crushed or chopped fruit.

Your family's preference is the best guide as to sweetness. 3 cups of sugar to 4 cups water makes a 40% syrup, 4 of sugar to 4 of water makes a 50% syrup, 6 to 4, 60%.

Regular glass mason jars may be used but tins are better. Much better are heavily paraffined, leakproof cartons.

Always allow at least 1" top space in containers for expansion.

To thaw, place container in room temperature for 6 to 9 hours. Do not open or fruit may discolor. Serve while still cold.

Fruit Preparation Table

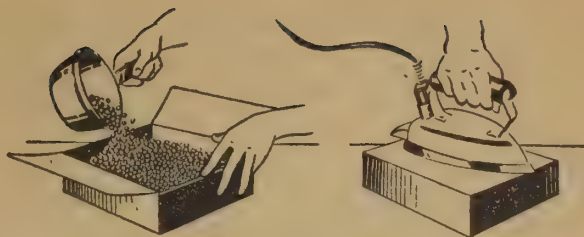
Fruit	Preparation	Sugar
APPLES	Peel and core. Slice. Blanch.	None or 50% syrup.
APRICOTS	Slice and pit.	50% syrup.
BERRIES		
Blackberries	Wash, stem, remove all unripe, soft or crushed berries.	40 to 55% syrup. If for cooking later, many prefer to crush slightly and add 1 part dry sugar to 3 or 4 parts fruit. Strawberries should be sliced.
Dewberries		
Raspberries		
Strawberries		
Currants	Wash, stem, remove poor berries, crush with sugar.	1 part dry sugar to 3 or 4 parts fruit.
Blueberries		
Gooseberries		
CHERRIES	Stem, wash and pit.	40 to 50% syrup for sweet. 60 to 70% syrup for sour.
GRAPES	Stem, wash, remove damaged fruit.	40 to 50% syrup.
PEACHES	Peel and halve or slice.	40 to 50% syrup.
PEARS	Peel, core and quarter or slice.	60 to 70% syrup.
PLUMS, PRUNES	Wash, pit, halve or quarter.	50 to 70% syrup.

Vegetables

Most farm families prefer to freeze only those vegetables which cannot be stored efficiently in cold cellars or which lose too much flavor in hot canning.

All vegetables must be blanched (scalded) before freezing. This is done after careful cleaning and washing. A large kettle may be used, with the vegetables in a wire basket or cloth bag. Use plenty of water and lower vegetables into it when the water is at a rolling boil. Count time accurately from the time a rolling boil is resumed.

For steam blanching, use a suitable kettle or pressure cooker. Fill 1-4 to 1-3 full and bring water to violent boil. Lower vegetables into vessel in wire basket and cover vessel, but do not lock cover down. Count blanching time when steam escapes around lid.



Pack vegetables dry in the same type containers as for fruit and seal carefully. The addition of a weak brine solution is not recommended unless there must be an extremely long period between packing and freezing.

Vegetables should not be thawed before cooking. They should be dropped in a small amount of rapidly boiling salted water and cooked about half the time required for fresh vegetables.

Vegetable Preparation Table

Vegetable	Preparation	Blanching Time	
		Boiling Water	Steam
ASPARAGUS	Clean and wash. Cut to fit package. Do not use very ends.	Small 2 min. Med. 3 min. Large 4 min.	2½ min. 3½ min. 4½ min.
BEANS, LIMA	Shell and wash.	Small 1 min. Med. 1½ min. Large 2 min.	2 min. 2½ min. 3 min.
BEANS, SNAP	Snip ends. String. Cut to ¾" lengths.	2 min.	3½ min.
BEETS	Remove tops, peel and slice.	3 Under 2" diameter min. Over 2" diameter Cook until tender	3½ min.
BROCCOLI	Wash in salt water to remove insects. Cut into convenient pieces.	Small 3 min. Large 5 min.	4 min. 5 min.
BRUSSEL SPROUTS	Cut from stem.	4 min.	5 min.
CAULIFLOWER	Cut into pieces about 1" thick	Small 3 min. Large 4 min.	4 min. 5 min.
CORN	Cut kernels from cob	2 min.	2½ min.
KALE or GREENS	Cut off stems. Clean carefully.	1½ min.	
KOHLRABI	Peel, Cut into ½" cubes.	1 min.	1½ min.
PEAS	Shell, sort, wash.	1½ min.	2 min.
SPINACH	Cut into convenient sizes. Eliminate thick stems.	2 min.	
SQUASH, summer	Cut into ½" slices.	2½ min.	3 min.
SWISS CHARD	Select small leaves. Cut off stems.	2 min.	

Other Foods

Butter and lard may be freezer-stored by simply wrapping in vaporproof paper and sealing. Unsalted butter keeps best.

Eggs can be stored only in liquid form, by scrambling cold and packing in containers.

Cream should be pasteurized by heating to 175° for about 15 minutes. It is then poured into waxed containers.

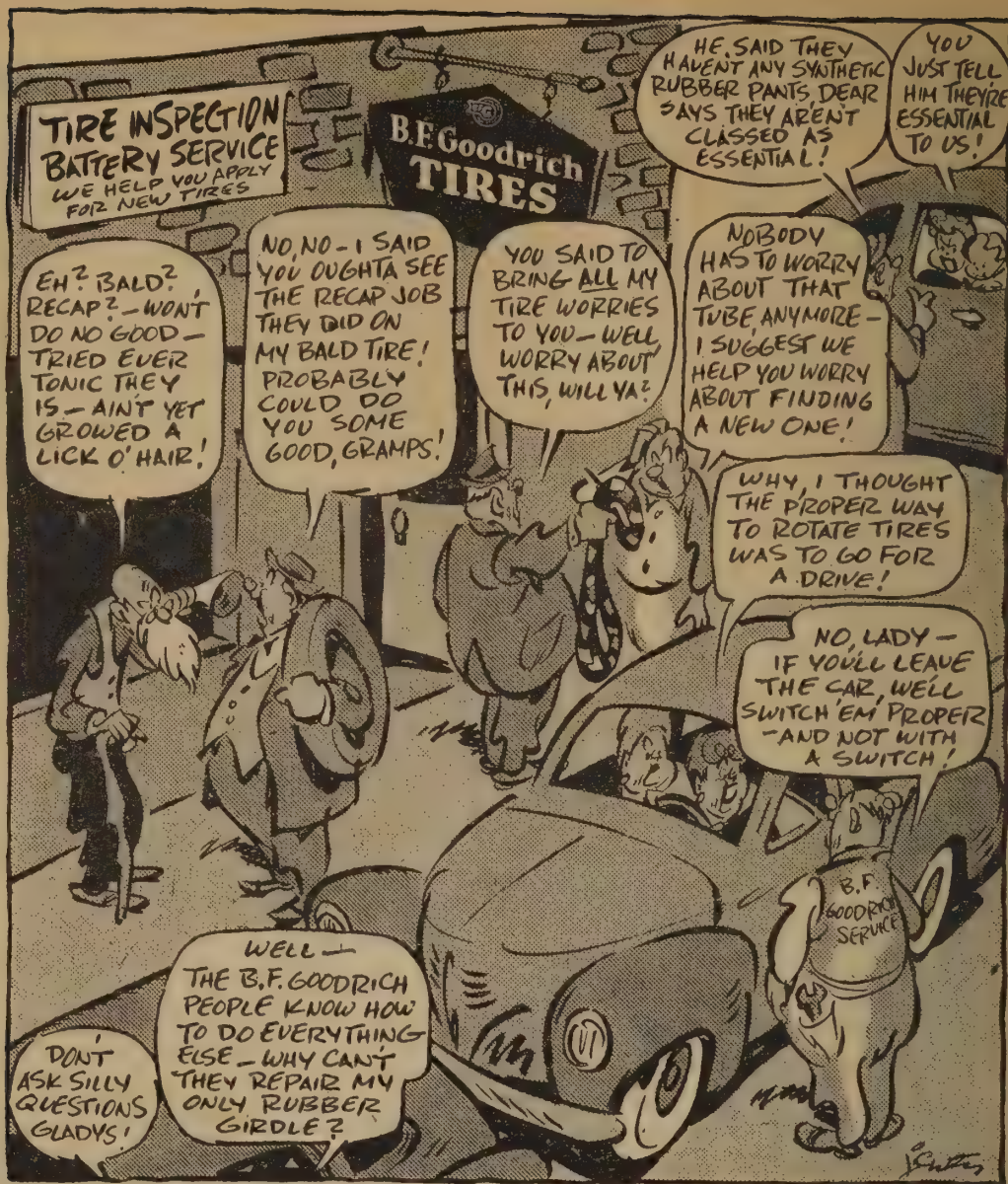
Cheese may be freezer-stored by wrapping in small packages.

Finally

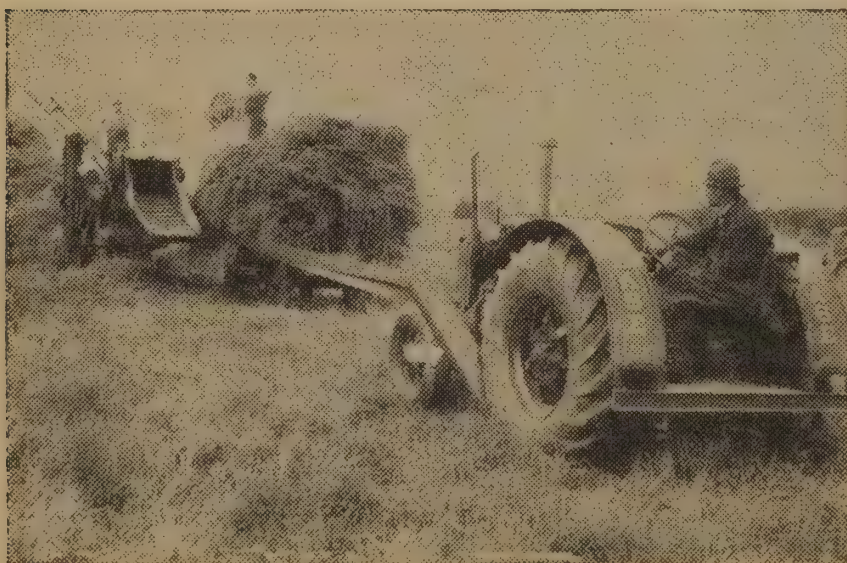
If you rent a storage locker, get the freezer plant's advice on the best products to freeze and on packaging materials.

If you own a home freezer unit, follow the manufacturer's directions for preparing, packaging and quick freezing.

Never re-freeze previously frozen food.



Blocking a Tractor for *Belt Work*



An effective method of blocking a tractor for belt work is pictured.

Using a heavy board as shown by the arrow, the tractor is prevented from rolling forward and the front end is held down firmly.

Rubber tires lengthen the life of belts by cushioning the tractor and reducing the shock of sudden belt tensions as pulley loads are increased.

Maintaining

Farm Buildings



Farm buildings should be frequently inspected and needed repairs made. An excellent plan is to note points which need repairing and do all the work at once. This prevents time-wasting tinkering.

Concrete Repairs

Cracks frequently appear in concrete walls, floors, cisterns, silos, etc. These may be due to settling or faulty construction. Cracks due to settling should not be repaired until all settling has ceased.

It is wise to repair all cracks, except minor surface cracks, since they tend to weaken the structure and may spread or extend into other parts. They also collect dirt and disfigure structures.

For most concrete repairs, a mix of 1 part of cement and 3 parts sand, with sufficient water to trowel easily, is usually used.

Cracks should be chipped so that the new concrete can penetrate solidly. Chisel the edges straight in as far as possible. Brush out loose dirt and moisten the crack thoroughly. Remember that concrete shrinks a little in setting, so fill the crack slightly above the old surface. Cover with old sacks, hay or straw and keep moist for a week or more.

Roof Repairs

Leaks in roofs should be noted during rainfall and marked with a nail or wood sliver driven through to the outside so it can be seen.

A split or curled wood shingle can be repaired by inserting sheets of tar paper or thin zinc or copper under it and the two adjoining shingles. A quicker, but not so neat method, is to cover the leaking spot with roofing compound.

A defective shingle can be removed by

splitting and then cutting off the nails, using a long hack saw blade. A new shingle can then be inserted and nailed through the shingle directly above it.

Composition shingle or tar paper roofs are best repaired with roofing composition. This may also be used to fill small holes in metal roofs. Large holes should be cut clean and filled with new metal sheets, soldered in and painted over.

Holes in leaking flashings or gutters may also be repaired with roofing compound. Flashings which are buckled or pulled loose should be nailed or pegged down firmly and patched with roofing compound.

Composition or metal materials are to be recommended for reroofing farm buildings because of their longer life and resistance to fire.

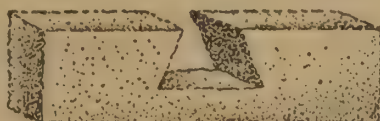
Structural Repairs

Serious defects in structural frames or footings should be repaired by competent builders. Minor repairs, however, may be made by the farm handymen.



Split or badly warped beams or joists may be repaired by first supporting with scantlings or house jacks. The beam is then sawed through and the supports adjusted so that it forms a straight line. Supporting members, equal in strength to the original beam are then bolted to it.

House jacks are also excellent for supporting buildings while replacing or repairing defective brick or concrete foundations or piers.



To repair cracks in cement, chisel so patch will be locked in and face off new cement slightly above old to allow for shrinkage in settling.

Battery Care



Proper care prolongs storage battery life . . . saves time, trouble and money by protecting against an unexpected failure.

The care of storage batteries is a simple and easy matter. But care must be given at regular intervals for full protection against an unexpected battery failure in your car or tractor. Here is all you need to do:

1. Clean the top of the battery with a stiff brush to remove dirt and corrosion. Use a solution of water and soda to remove any corrosion remaining on the terminals after brushing. Corrosion affects the terminals and eats away the cables. If not removed, a broken cable may result.

2. Test the solution in each cell with a hydrometer to determine its condition.

A hydrometer reading of 1.270 or higher indicates that the battery is fully charged. A reading of 1.225 indicates half discharge. When the reading is 1.225 or lower, the battery must be recharged to avoid damage to the plates. Have the electrical system inspected if the hydrometer reading of the battery is found to be consistently low.

3. Check the water level of your car battery each week or every 1,000 miles. Check the water level of your tractor battery every day when the tractor is in constant use for long periods of time. Fill each cell with pure water to $\frac{1}{4}$ inch above plates, if the liquid level is low. Be sure to guard against overfilling.

4. Inspect cables and terminals. Tighten loose cables or terminals to avoid trouble. Replace broken or worn cables at once.

5. Grease terminals with vaseline or petroleum jelly . . . making sure that all corrosion has first been removed.

6. Make sure battery cradle and hold-down rods are tight so that damage to the battery and cables is prevented.

Take care of your car or tractor battery and you reap a bumper crop of power for your starting and lighting needs. Neglect your battery and trouble is sure to come.

Products made with B. F. Goodrich Koroseal . . .

the miracle material

See page 44 for the complete story about Koroseal.



Featherweight raincoats.



Baby pants — "airy-weight," waterproof, easily washable.



Waterproof shower curtains.

Spot and Stain Removers

Most spots and stains can be removed without difficulty in the home laundry.

Here are five basic rules:

1—Act quickly. Stains are easier to remove when they are fresh.

2—Try lukewarm water before using any chemical remover. The directions below are for use after water has failed.

3—Before you use any chemical, particularly on colored material, test it on a small hidden edge of the piece to make sure it will not spot the material or run the color.

4—Keep a bottle of B. F. Goodrich Spot Remover on hand. This new chemical cleaning fluid brushes spots away easily and quickly. The self-feeding mohair brush top is always ready for instant use.

5—The directions given below have tested thoroughly, but, because of the many synthetic materials and colors now sold, they cannot be guaranteed. If you stain a very valuable piece, it is recommended that you send it to a professional cleaner.

BLOOD—Soak in cold water, then wash with neutral soap and tepid water. Or spread on cold starch paste, allow to dry and wash. Stubborn stains may be removed from cotton or linen by soaking in a solution of sodium hypochlorite, and from silks or wool by sponging with hydrogen peroxide.

CHOCOLATE AND COCOA—Try soaking in borax and cold water first. If this doesn't work try sponging with B. F. Goodrich Spot Remover or benzine.

COFFEE OR TEA—Try hot water first, then bleach, if necessary, with lemon juice or cream of tartar. A stronger bleach is sodium hypochlorite for cottons or, for woolens and silks,

hydrogen peroxide. If colors are apt to run, use only tepid water followed by neutral soap and weak ammonia solution. If grease remains, use B. F. Goodrich Spot Remover or benzine.



CREAM, ICE CREAM AND MILK—Soak in cold water, then launder with neutral soap and warm water. If grease remains, use B. F. Goodrich Spot Remover or benzine.

EGG—Soak linens or cottons in cold water, then launder. Rub silks with table salt or sponge with cold water, then apply B. F. Goodrich Spot Remover.

FRUITS—Lemon and citrus fruit juices should be sponged with clear hot water and then with a weak solution of ammonia. Treat other fruit juice stains as directed for coffee.

GRASS—Soak the stain well with kerosene, then brush out with B. F. Goodrich Spot Remover, gasoline or alcohol.

GREASE, OILS

—Lay over blotting paper and sponge with gasoline, B. F. Goodrich Spot Remover or benzine.

To prevent the grease from spreading on silks, circle with French chalk or fuller's earth.

INK—Often difficult. Try cold water first. If unsuccessful try B. F. Goodrich Spot Remover, alcohol, ammonia or weak oxalic acid over a blotter or absorbent material.

IRON RUST—Wet with lemon juice and salt or use weak oxalic acid.

MEDICINE, IODINE—Sponge with clear water, then use alcohol or ammonia.

MILDEW—Impossible if fabric is damaged. Otherwise wash in cold water and bleach with sodium hypochlorite (cotton or linen) or hydrogen peroxide (silk or wool).

PAINT—Sponge with Goodrich Spot Remover, benzine, or gasoline.

PERSPIRATION—Wash with warm water and soap. Bleach as for coffee, if necessary.

SHOE POLISH—Try neutral soap and water, turpentine or alcohol.

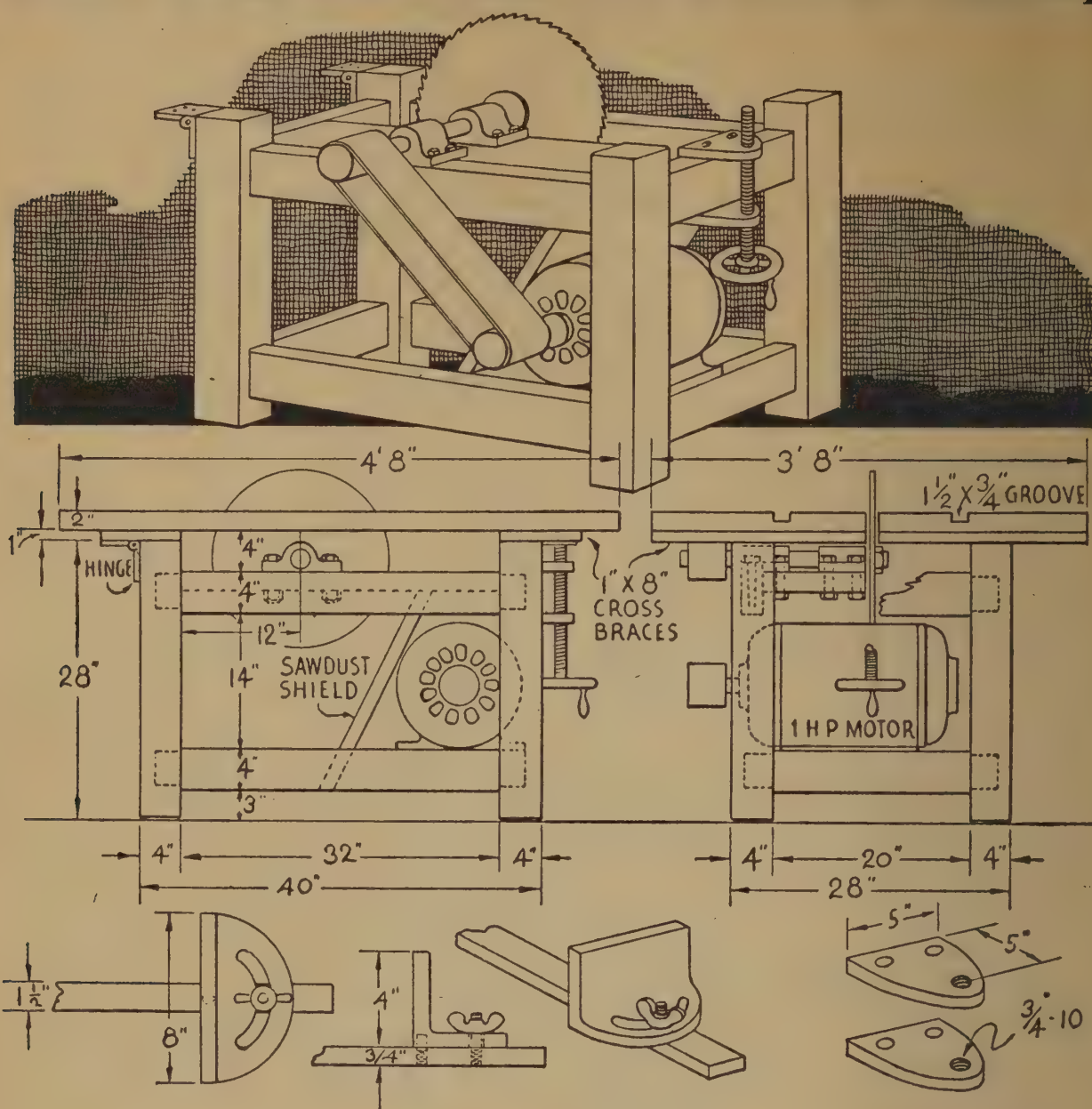
TAR, PITCH—Wash with benzine or naphtha soap, then soak with turpentine, gasoline, or B. F. Goodrich Spot Remover.

VASELINE—Sponge with kerosene or turpentine.

WAX—Scrape off as much as possible. Sponge with benzine or gasoline over blotting paper or absorbent material.



Home Built Saw Table for Farm Workshop



This handy saw table will handle work up to 3" or 4" thick. It is sturdily designed and the motor used should be powerful enough to turn at least a 14" blade at high speed without stalling on the heavy cuts. (A 1 H.P. motor is recommended).

A combination rip-and-crosscut blade is most convenient for general work. However, special ripping and crosscut blades should be available for quantity work.

The saw arbor should be of heavy-duty type. It can be purchased ready-made or built from bearing blocks, with a suitable shaft. This should be threaded at one end so the blade can be securely clamped between two heavy washers and nuts. A flat or V-belt pulley should be mounted at the other end.

The frame of the table should be built

of maple or other hardwood. The legs should be about 4" square, the side and end rails being mortised into them. The arbor bearings are attached to a plank 2" x 9" x 32", screwed firmly to the inside of the frame flush with the top of the rails. The motor should be mounted on a cross piece attached flush with the lower rails.

The table top is made of 2" planking glued edge to edge and screwed to 1" x 8" cross cleats. Heavy hinges fasten the top to the frame. A handwheel screw may be rigged from junk parts to raise or lower the top for sawing to exact depths.

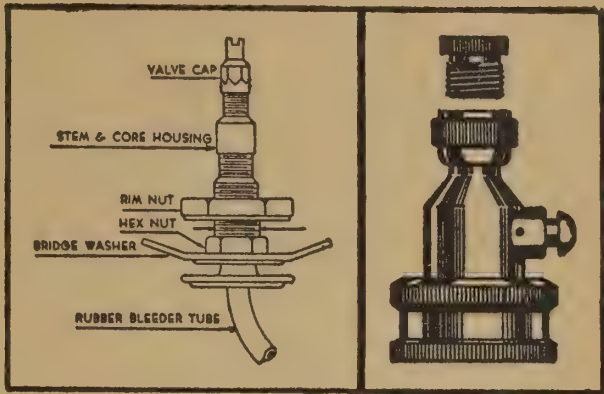
A handy sliding gage can be made from a flat steel bar and a short length of angle iron, as shown in the detailed sketch. The table top should be grooved on both sides of the saw blade so the flat steel bar will slide smoothly.

Correct Method of Using Liquid Weights

in Tractor Tires

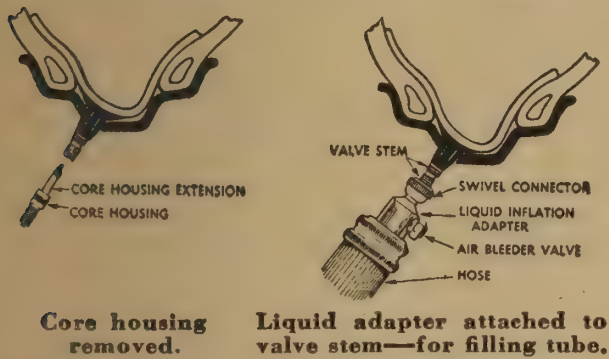
Many farmers prefer using liquid in tires to obtain increased traction, because liquid also acts like a shock absorber, reducing bounce or rebound. Liquid weighting is recommended by B. F. Goodrich.

Where tires are equipped with B. F. Goodrich two-piece valves and bleeder extensions, the tires may be quickly filled and quickly and completely drained. Liquid may be injected for heavy work and then drained, either for light operations or before freezing weather occurs — or an anti-freeze solution may be used.* Using ordinary garden hose with a valve adapter, tires may be water-filled from any source. Where pressure system is not available, liquid may be injected by any of these methods: (1) A pressure tank in conjunction with a spark plug pump; (2) A hand-



operated pressure pump* similar to the spraying type pump; (3) By siphon action from a tub, barrel or similar container. If siphon method is used the container should be about 6 or 8 feet above the tire valve.

*See page 33

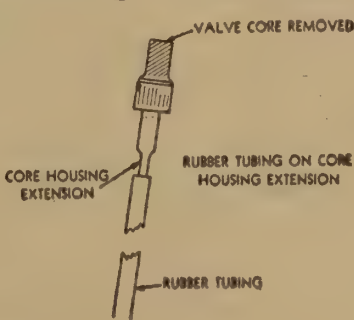


How to Inject the Liquid

1. Jack up tractor and place tube valve at top of wheel.
2. Remove core housing.
3. Attach hose equipped with adapter to valve stem.
4. Inject water from regular pressure line until filled to desired level.
5. Replace core housing and tighten swivel nut securely with thumb and fingers only — DO NOT USE PLIERS.
6. Inflate tire to recommended air pressure and attach valve cap.

How to Remove the Liquid

1. Place tube valve at bottom of wheel — do not jack up tractor.
2. Remove core housing — allow liquid to flow from tire.
3. Jack up tractor — to permit remaining liquid to gather at bottom of tire.
4. Attach rubber tube to extension on core housing. Replace core housing (with rubber tube inside tire) in valve stem, inflate tire to 35 pounds pressure and
5. Remove valve core to allow remaining liquid to flow from tire. Remove rubber tubing — insert valve core and inflate



DO NOT leave rubber tubing attached to core housing when tire is in regular service.

Important Note: Liquid weighting reduces the bruise resistance of tires. The following table shows the comparisons with a bruise-resistance rating of 100% for an air-filled tire:

Content	Bruise-resistance Rating
Air-filled	100%
Liquid to valve level	95.5%
Liquid ... 9/10 filled	85.0%
Liquid ... completely filled (not recommended)	73.0%

Anti-Freeze Chart

For Liquid Inflation of

B. F. Goodrich Farm Service Silvertowns

The use of liquid in tractor tires requires proper precautions in those sections of the country where freezing weather occurs.

If the tires are not drained before freezing weather, an anti-freeze solution should

be injected. Commercial (77-80%) flake calcium chloride has been found to be the most economical and practical anti-freeze for this purpose. The calcium chloride solution will not deteriorate the rubber and is readily obtainable in all sections of the country.

Solutions in tables below made with Commercial (77-80%) Flake Calcium Chloride. Protects to 25 below zero.

Never pour water on calcium chloride; add the flakes to the water, stirring until dissolved.

SIZE OF TIRE	SIZE OF RIM	WEIGHT OF SOLUTION POUNDS	LIQUID CAPACITY GALLONS	TO MIX SOLUTION USE	
				POUNDS CALCIUM CHL.	GALLONS OF WATER
6.00-22	4.50E	62	6.50	12.00	6.00
7.00-24	5.50R	105	11.00	19.50	9.75
7.50-24	5.50R	134	14.00	26.50	13.25
7.50-40	5.50R	203	21.50	39.00	19.50
9.00-24	6.00S	181	19.00	34.00	17.00
9.00-36	6.00S	276	29.00	53.50	26.75
9.00-40	6.00S	283	30.00	53.50	26.75
10.00-36	8.00T	379	40.00	73.00	36.50
11.25-24	8.00T	296	31.00	58.00	29.00
11.25-28	8.00T	334	35.00	65.50	32.75
11.25-36	8.00T	410	43.00	80.50	40.25
11.25-40	8.00T	440	46.00	84.50	42.25
12.75-24	8.00T	400	42.00	78.00	39.00
12.75-28	8.00T	434	46.00	84.50	42.25
12.75-32	8.00T	505	53.00	97.00	48.50
13.50-24	8.00T	435	46.00	84.50	42.25
13.50-28	8.00T	401	52.00	94.50	47.25
13.50-32	8.00T	567	60.00	109.50	54.75

For data on other than conventional tires, call or see us.

IT'S A FACT!

One of the largest pieces of automotive equipment ever built is a trailer capable of hauling 110-ton loads. It rolls on 34 B. F. Goodrich tires.

Interesting Facts about *Different Synthetic Rubber*

There are now three principle types of synthetic rubber available for use, either to replace natural rubber or to serve purposes for which natural rubber is not suitable.

"GR" stands for Government Rubber, and letters used with GR — "S", "T", and "M" — are used to designate the various types of synthetic rubber. With a few exceptions, products made with synthetic rubber are identified by color medalions or stripes. GR-S is identified by a red marking; GR-I is identified by a light blue marking; and GR-M with yellow.

GR-S is the general purpose type of rubber used by all manufacturers in making tires, and many other products.

GR-I is commonly called Butyl Rubber. It is now used for large-size truck inner

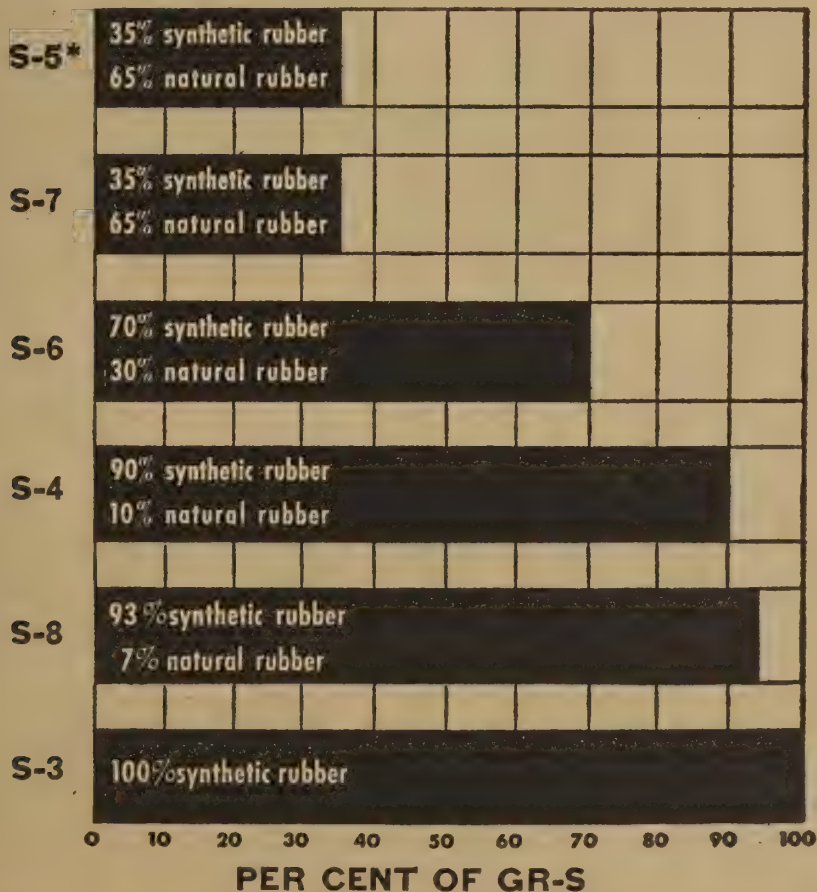
tubes because it holds air better than crude rubber or GR-S tubes.

GR-M is generally known as Neoprene. This synthetic rubber is used primarily in the making of mechanical goods — hydraulic brake hose, conveyor belts and other products which must be highly resistant to oils and greases.

There are other types of synthetic rubbers having varying properties, and which are used for specialized needs. Among them are "Hycar" rubbers, produced by a company jointly owned by B. F. Goodrich and the Phillips Petroleum Company. "Hycar" rubbers are "tailor-made" for many special purposes, and applications, some of which natural rubber was unable to fulfill satisfactorily.

Synthetic Rubber Formulas

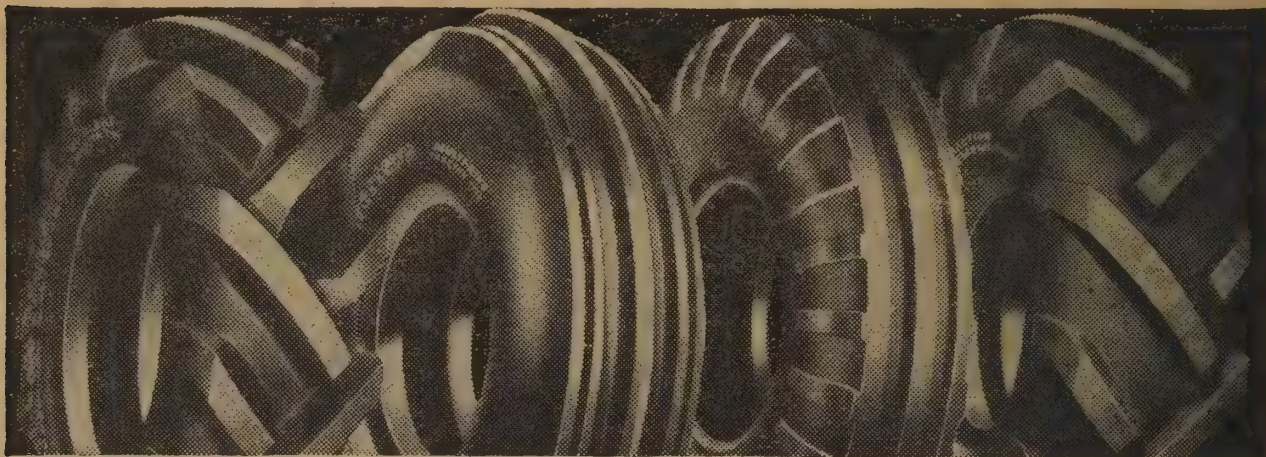
This chart shows approximate percentage of synthetic and natural rubber used in various tires.



*SYNTHETIC RUBBER TREAD; CARCASS NATURAL RUBBER

All tires now being made carry one of the above "S" markings. By comparing the mark with this chart, you can identify the tire's synthetic and natural rubber content.

Tire Buyers *Guide* for Tractors, Implements, Trucks and Passenger Cars



HI-CLEAT (Rear Tractor)

Open, pocket-free tread for positive self-cleaning. Note extra deep reinforced cleats in pairs.

MULTI-RING (Front Wheel)

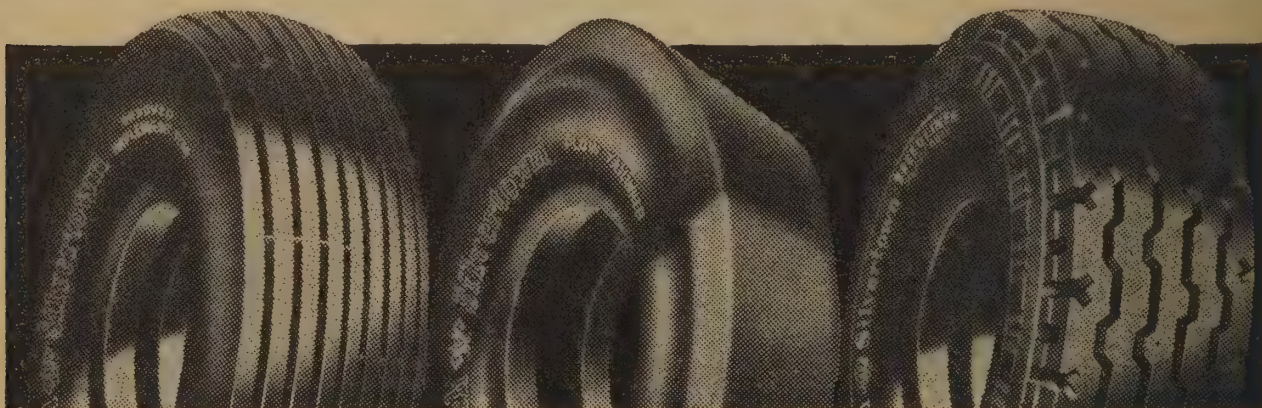
A front-wheel tractor tire combining the best features of the Skid-Ring and Rib-Tread designs.

RIB-TREAD (Front Wheel)

This all-purpose front-wheeler provides maximum cushioning and is unequaled for long wear.

TRACTION IMPLEMENT

Rugged cleats provide traction required by ground-driven implements — garden tractors.



GROOVED IMPLEMENT

Grooved design reduces sideslip and rolling resistance, gives maximum cushioning. Extra-thick tread for longer life.

PLOW TAILWHEEL

Plow to more uniform depth, make better corners, move faster between jobs, greater cushion from operating shocks.

SPEEDLINER (Truck)

For all-around, heavy duty, highway transportation. Improved design — new ventilation grooves give cooler running.



ALL-PURPOSE (Truck)

For extra traction off-the-road and long wear on the highway. Smooth running, long wearing, self-cleaning.

SUPER-TRACTION

For use on trucks when traction is needed in tough-going. Deep, self-cleaning tread. Protected against rut wear.

MUD-SNOW (Passenger)

Two-way traction — forward or backward through mud and snow, on or off the highway, without use of chains.

REGULAR (Passenger)

Rugged, tough tread and carcass give long wear. Tread designs give maximum skid protection and smooth riding.

Candy Recipes

Creamy Chocolate Fudge

2 cups sugar, granulated or light brown
 4 squares chocolate
 $\frac{3}{4}$ cup milk or cream
 2 to 4 tablespoons butter
 1 teaspoon vanilla
 $\frac{1}{8}$ teaspoon salt

Place the sugar and chocolate in a double boiler, heat until the chocolate is melted, and mix well. Add the milk or cream, and cook over direct heat without stirring until the sirup forms a soft ball when dropped in cold water, or until a candy thermometer registers 238° F. Remove the candy from the fire and let it cool without stirring. When it is lukewarm, add the salt, vanilla, and butter, and beat until creamy. Then quickly turn the candy into a buttered pan and when firm cut in squares, or if preferred, drop by teaspoonfuls onto waxed paper.

To vary the recipe, spread a cup of chopped nuts, raisins, or marshmallows cut into small pieces in a greased pan, and pour the fudge on top.

Coconut Drops

2 cups brown sugar
 $\frac{3}{4}$ cup milk
 2 tablespoons butter
 $\frac{1}{4}$ teaspoon salt
 1 teaspoon vanilla
 1 cup shredded coconut

Mix the brown sugar with the milk and cook until soft ball is formed in water. Stir constantly. Add butter, salt, vanilla and coconut and set aside to cool. Beat until creamy. Drop by spoonfuls onto a greased pan.

Corn Flake Brittle

Mix 1 cup granulated sugar, 2 cups brown sugar, $\frac{1}{2}$ cup corn sirup, 1 cup water in saucepan and cook without stirring until brittle when tested in cold water. Remove from fire, add $\frac{1}{4}$ cup butter, $\frac{1}{4}$ teaspoon salt, 2 cups corn flakes. Mix with as little stirring as possible, and pour in thin layer on buttered pan. When cold, break into pieces.

Turkish Paste

3 tablespoons gelatin
 $\frac{1}{2}$ cup cold water
 1 pound sugar
 $\frac{1}{2}$ cup hot water
 $\frac{1}{4}$ teaspoon salt
 3 tablespoons lemon juice
 Green coloring
 Mint flavoring
 1 cup finely chopped nuts

Soften the gelatin in the cold water for 5 minutes. Bring the hot water and sugar to the boiling point. Add the salt and gela-



tin, stir until the gelatin has dissolved, and simmer for 20 minutes. Remove from the fire and when cool add the lemon juice, coloring, and mint flavoring. Stir in the nuts and allow the mixture to stand until it begins to thicken. Stir again before pouring into a wet pan and have the layer of paste about one inch thick. Let stand overnight in a cool place. Moisten a sharp knife in boiling water, cut the candy in cubes, and roll in powdered sugar.

Maple Cream

2 pounds brown sugar
 $\frac{1}{2}$ pound almonds (blanched and cut in pieces)
 $\frac{1}{2}$ pint sweet cream

Boil sugar and cream together until it forms a firm ball when dropped in a little cold water. Add nuts, beat until cold or firm enough to spread on buttered tins.

Wintergreen Taffy

Place 2 cups granulated sugar, $\frac{1}{2}$ cup water, 2 tablespoons butter in saucepan and bring to boil. Then add 4 tablespoons vinegar, 1 teaspoon wintergreen flavor, (or to suit taste) and boil until brittle when dropped in cold water. Pour into buttered pan and pull thoroughly when cool enough. Coloring may be added, with the flavor, if desired.

Divinity Fudge

2 cups sugar
 $\frac{1}{2}$ cup corn sirup
 $\frac{1}{2}$ cup water
 $\frac{3}{4}$ cup candied cherries
 2 egg whites
 $\frac{3}{4}$ cup blanched almonds
 1 tablespoon almond or lemon extract

Put the sugar, water and corn sirup into a sauce pan. Stir it while it dissolves over the fire, then let it boil without stirring to the light crack stage (265°F.). While it is cooking, beat the whites of eggs stiff, and when the sirup is ready, pour it over them, beating constantly. Beat until creamy, add nuts, cherries, and extract, and pour into buttered tins. (Nuts and cherries are optional).

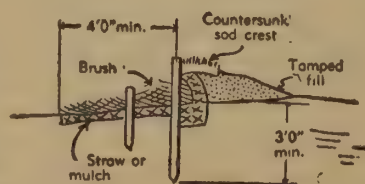
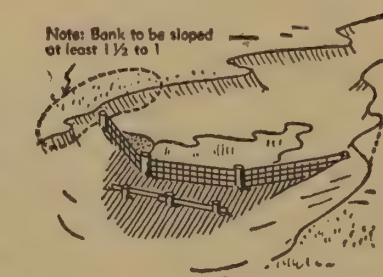
Two Types of Temporary Check Dams

Woven-Wire Dams

Woven-wire dams are widely used because of the ease with which they can be constructed, the availability of material, and the possibility of using them in different types of gullies. They are used in gullies of moderate slope and small drainage area. The dam is commonly built in a somewhat crescent or half-moon shape, with the open end upstream. This allows for a longer spillway than is possible on a straight dam and at the same time protects the ends of the dam. The amount of curvature is not fixed by rule. An offset equal to about one-sixth of the width of the gully at the dam site will generally provide sufficient curvature. For example, if the gully is 24 feet wide, the spillway of the dam would be about 4 feet downstream from the abutments. A row of posts is set along the curve of the proposed dam at about 4-foot intervals and 2 to 3 feet deep. One interval should fall near the center of the gully to form the central portion of the spillway. A trench about 6 inches deep and of about the same width is dug along the upstream side of the row of posts. Heavy-gauge woven wire is placed against the posts, with the lower part set in the ditch so that 10 to 12 inches projects above the ground surface along the spillway interval. It is desirable to place the coarse mesh on the bottom. The wire should be securely stapled to the posts. If the top of the wire is kept approximately level along the central interval used for the crest of the spillway a much better spreading of water will be obtained as it passes over the structure.

If plenty of rocks are available they may be used for the apron; otherwise brush or sod is generally used. The brush is anchored by pulling the butt ends through the wire mesh. Enough brush is laid to make an apron at least 4 feet long and extending at least 2 feet on each side of the posts that form the level portion of the spillway.

To promote rapid filling straw, fine brush, or similar material should be packed against the wire on the upstream side to the height of the spillway crest. This should be backed with a well-tamped earth fill.

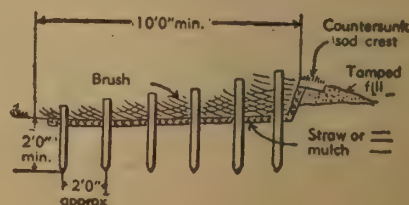
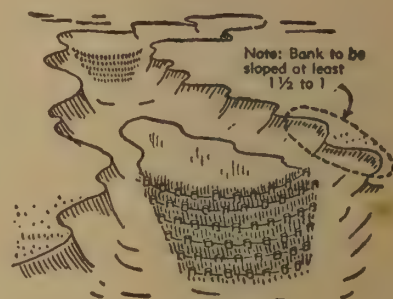


A woven-wire dam.

Brush Dams

Brush dams are best suited for gullies with small drainage areas and with soil conditions that permit the driving of necessary anchoring stakes. These dams are cheap and are easy to build. Many kinds of brush dams are in use; the kind chosen for a particular site depends on the amount of brush available and the size of the gully to be controlled. Whatever type is used, it is important that the center of the dam be kept lower than the ends to allow water to flow over the dam.

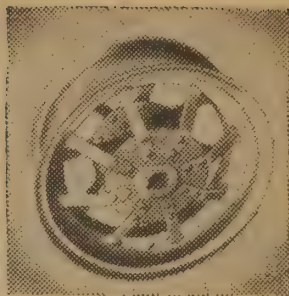
The sides and bottom of the gully for a distance of 10 to 15 feet along the site of the structure are covered with a thin layer of straw or similar fine mulch, which is slightly countersunk in order to form a bond between the structure and the soil. Brush with butts pointing upstream is next packed closely together over the mulch to about one-half of the proposed height of the dam. Several rows of stakes are then driven crosswise of the gully, with the rows about 2 feet apart and the stakes 1 to 2 feet apart in the rows. The stakes should extend up the sides of the gully and should be driven only partly in at first. The brush fill is then completed and heavy galvanized wire stretched along the rows of stakes and fastened to them. When this has been done, the stakes are driven down until the wire firmly compresses the brush in place. Several large rocks are sometimes placed on top of the brush in order to keep it compressed and in close contact with the bottom of the gully. The center of the dam should be made low enough to provide the necessary spillway capacity.



A typical brush dam.

How to Cut Down

Steel Wheels



Some farmers have the equipment, time, and the "know how" to make the changeover from steel wheels to rubber tires. But by far the great majority prefer to have the job done by trained experts, saving money and time in the long run.

We recommend, if you wish to make a changeover, that you give us a call. We'll come out, thoroughly inspect your steel-wheeled tractor, survey the type of work it is used for, and recommend the B. F. Goodrich Silvertowns best suited to your needs.



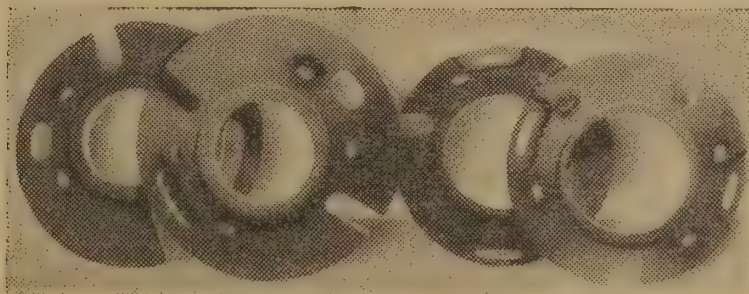
After this recommendation, we'll remove your steel wheels and take them back into our shop — where we have complete equipment to do the job speedily.

The first step we take is to have your wheels cut down expertly and apply pneumatic tire rims. This saves you the expense of buying new wheels.

When the wheels have been cut down, rims applied, then carefully adjusted and located, we install the B. F. Goodrich Tires suited to your particular needs. The entire job doesn't take long when done our expert way, and doesn't cost much. The minute you begin using your B. F. Goodrich-tired tractor you begin saving on fuel, on time, and on repairs — and you save every day. You'll find new comfort, too — because Silvertowns are the easiest-riding tractor tires ever built.

Your implements can also be changed over to new B. F. Goodrich implement tires in much the same way — in some cases, one set of tires will fit several implements. Call us — we can do the job for you, on tractor or implement.

Wheel Weights



Rear-wheel weights are available in units of 150 lbs. each, and are designed to permit using a total of three weights, or an added load of 450 lbs. to each rear wheel.

Usually one or two weights per rear wheel are adequate for above-normal traction. When multiple weights are used, the gross rear axle load should not exceed the

combined carrying capacity of the two rear tires.

Weights are applied to the outside of the wheels. The first rear-wheel weight is designed to fit around and fasten to the spokes by hook bolts. Additional weights may be attached to the first weight by using straight bolts.

Rubber at War



Behind the war headlines lies a story of stupendous achievement. It is the story of America's vast production of the tools of war. It is a story, too, of the tremendous job done by American farmers in providing food for millions of American fighting men and for our allies.

We can tell you here only a portion of one part of the story — how B. F. Goodrich products "went to war".

B. F. Goodrich's years of experience helped meet the huge military tire needs. Jeeps, scout cars, armored cars, personnel carriers, trucks of all sizes, mobile kitchens, mobile hospitals, repair units, tractors, gun carriages — to name a few — roll on B. F. Goodrich tires.

B. F. Goodrich rubber tracks, developed originally for use on agricultural equipment, move half-tracks, and more than 50 other war vehicles speedily on their missions.

New Developments Constantly

Here are just a few examples. A special van-truck for hauling explosives in ordnance plants, was equipped with B. F. Goodrich tires that rolled on steel rails; the tires cushioned the load and eliminated dangerous jars.

Barrage balloons to guard the skies were made by B. F. Goodrich.

The famous De-Icer for plane wings, a B. F. Goodrich product in wide use before the war, adds invaluable safety to war flying. Also helping save flyers' lives and military aircraft are bullet-sealing fuel tanks made by B. F. Goodrich.

On "Sea Duty"

No longer is the moving of men and supplies across rivers a major problem. Now, using B. F. Goodrich-made rubber pontons, or "floats", bridges can be built quickly that are strong enough to hold a 30-ton tank.

War ships and cargo vessels use great quantities of rubber. Endless miles of rubber go into insulation. B. F. Goodrich rubber bearings hold ships' propeller shafts. And scores of other B. F. Goodrich rubber products are used — in air hoses, fire hoses, gaskets and seals, jacketing, life belts, steam hose, tarpaulins, universal joint coverings, V-belts, wringer rolls, and X-ray sheeting, to name a few.

On the Home Front, Too

B. F. Goodrich products are on the job in thousands of ways; rubber conveyor belting helps speed plant production lines; rubber vibro-insulators are used on thousands of machines; in hundreds of factories, lift-trucks, hand trucks, and trailers roll on B. F. Goodrich tires.

Many Now, More to Come

The list of B. F. Goodrich products at war goes on — gloves, gas masks, oxygen masks, aviation boots, life vests, flotation gear, gasoline hose, weather balloons, and many more. Someday, when military secrecy is no longer necessary, perhaps B. F. Goodrich can tell you many more fascinating stories of its many products that went to war.



Rules for Tractor Tire Care

Tractor and implement tires are among your best investments, because they bring you substantial returns in the form of savings in time and money. The longer they work for you the more you save, and the better care you take of them the greater the return to you. You can get the greatest possible return from your tires by observing these common-sense practices.

1. *When you buy tires, choose the proper size*—based on the load they have to carry and the job they have to do. We will be glad to advise you.
2. *Keep your tires properly inflated at all times.* Air pressure should be checked at least every two weeks. Many farmers check tires every week or every 60 working hours. *Underinflation* causes deflection of the tire and results in faster-than-normal wear; it also allows the tire to slip on the rim, and this slippage, if excessive, will tear the valve out of the tube. *Overinflation* decreases traction, accelerates wear, causes harder riding, and leads to tire failure because of impact or penetration breaks. Proper inflation is even more important with synthetic rubber tires than with crude rubber tires.
3. *Keep your tractor under cover* and jacked up when not in use for a long period of time. When tractor is put back in service tires should be inflated to correct pressure. If water is used

for wheel weight, be sure to add anti-freeze or drain before freezing weather begins.

4. *If a rear tractor tire contains liquid weight* extra attention should be given to maintaining correct air pressure. Because there is a small volume of air in the tire, a slight leak causes a much greater decrease in pressure than if the tire were 100% air-filled. Valve caps should be used always.
5. *Do not allow tires to rest in grease or oil*, because both shorten the life of rubber. After using your tractor for spraying, wash off any chemicals that may have accumulated on the tires.
6. *Inspect your casings regularly* for cuts, bruises, and other damage. Have any injuries in tires repaired promptly to check their further development. If any unusual wear is detected, consult us for help in tracking down and correcting the cause.
7. *Use reasonable care in driving*, especially on the highway, as tires will not last their normal life under constant, excessive abuse. Severe road shocks caused by striking curbs, chuckholes, or other obstructions, often result in rim bruises.

For helpful information and advice on tire care or other tire problems, see us.

Housekeeping Time Savers

A small tweezers, which can be had in any dime store, is a splendid weapon for removing the pin feathers from chickens. It helps to prevent tearing the skin.

* * *

To remove chewing gum from clothes, take a piece of ice and hold it over the gum for a few minutes. Then brush off the gum.

* * *

If you break one end of an egg before boiling, crack the other end too. Then the contents will not come out.

* * *

If you have a cream or syrup pitcher that insists on dripping all over your fresh table linen, spread a little butter on the underside of the spout. It'll stop!

Cream can be whipped in about half the usual time if six or eight drops of lemon juice per pint are added.

* * *

When the tops of your mason jars become dull and dirty from constant use, place them in sour milk, let them set overnight. Then wash them in hot suds and scald.

* * *

When washing cut glass, add a little bluing to the soapy water. The glass will glisten amazingly.

* * *

You can put a quick end to running icing trouble if you'll dust the cake lightly with cornstarch before you ice it. This prevents thinnest icings from running!

Preparing for the New Season*

Most implements are only used a short time each year. For that reason, it is advisable to refer to the owner's or instruction manual of each machine before using it. This will refresh your memory on proper lubrication, adjustments, and operating procedure.

Starting Stored Machine

Clean machine with kerosene or other solvent to remove protective coating of grease or oil put on bright surfaces before storage.

Assemble and install any parts taken off for storage or for reconditioning. Adjust any parts which were not taken care of during slack season. Check and tighten all bolts and rivets. Check all safety devices to be sure they function properly.

Lubricate complete machine and check to see that all bearings take grease or oil; the old grease may have dried out and hardened. Bearings that do not take grease should be taken apart and cleaned with brush and kerosene. If machine has been stored outside it is advisable to flood all moving parts with kerosene to cut rust, dried grease, dirt, etc. Lubricate, and operate machine to see that all parts are

"free" and that bearings do not heat.

Before starting engines that have been in storage all internal parts should be free and properly lubricated. Place $\frac{1}{2}$ pint of half-and-half mixture of gasoline and light oil in each spark plug hole, flush valves with same mixture, and flush crankcase with kerosene. Crank engine briefly to expel excess mixture from combustion chamber. Drain kerosene from crankcase and fill with new lubricant. Don't run engine at full speed immediately after starting. Check valves to see if they are all functioning; if not, loosen with kerosene.

Check oil level in enclosed gear cases. If lubricant has not been drained and case flushed with kerosene, do so at this time before filling to the correct oil level.

If you have any question about caring for or operating a machine and can not find the information in the instruction book, or do not have one, see the local implement dealer.

Never operate a machine unless all safety shields are in place, especially those covering the power drive from tractor to implement.

**Courtesy — International Harvester Company*

Here's What Farmers Say About B. F. Goodrich Tires . . .



"I used to lose several days time every season working a section of my farm because it was hard for my tractor to pull through. When I switched to B. F. Goodrich tires, there was a big difference; my tractor got through on muddy days when my neighbors couldn't use theirs, because they couldn't make traction. B. F. Goodrich tires grip better and speed up working time."

J. S. McBride, Muscatine, Iowa.

"We have four tractors on B. F. Goodrich Hi-Cleat tractor casings and we have 900 acres under cultivation. We have used other makes of tractor tires and have found that B. F. Goodrich with its open cleats, cleans better and has more traction. We also have found that B. F. Goodrich tires don't weather rot like other makes of tires."

Samuel Sparks, Jr., RFD #3, Lincoln, Illinois



"I have used B. F. Goodrich tires on my tractor for eight years. During this time my tractor has been out in all kinds of weather. I frankly don't see how the tires stood the gaff."

"The first set of tires I had were the old R-5 design and were second hand. My second set, which I still use, are the Hi-Cleat design. I can truthfully say they are the best tires, in my opinion, on the market."

Eddie Zaloudek, Kremlin, Oklahoma



Farm Measures and Reckonings



To Measure Round Stacks

of average shape, measure vertical distance from ground to bulge (A) and add $\frac{1}{4}$ vertical distance from bulge to top (B); multiply this sum by circumference of stack at bulge (C) and multiply resulting product by circumference at ground (D). Dividing last product by 12 will give cubic feet, approximately.

Distance Traveled in Plowing 1 Acre

	Miles
With a 10-inch plow the distance is...	9.9
With a 12-inch plow the distance is...	8.2
With a 14-inch plow the distance is...	7.1
With a 16-inch plow the distance is...	6.2
With 2 - 12" plows the distance is...	4.1
With 2 - 14" plows the distance is...	3.5
With 3 - 14" plows the distance is...	2.4

A one-horse plow covers about 1 acre per day; a two-horse walking plow covers from $1\frac{1}{2}$ to 2 acres a day; gang plow, cutting 28 inches and drawn by four or five horses, with one man, covers from $4\frac{1}{2}$ to 5 acres per day. Which do you use?

Capacity of a Cistern

- To find the capacity of a round cistern, find the distance across in feet and multiply this number by itself. Multiply the product by the depth in feet. To find the capacity in gallons, multiply this figure by $5\frac{7}{8}$; for barrels, multiply by .1865.

Period of Incubation

Kind of Poultry	Days
Hen	21
Pheasant	22-24
Duck	28
Duck (Muscovy)	33-35
Turkey	28
Peafowl	28
Guinea fowl	26-28
Ostrich	42
Goose	30
Pigeon	17

The period of incubation varies somewhat with conditions, so that a hatch may run one or two days over or under in some cases.

To Measure Contents of Bins

To measure wheat, oats, barley, rye, buckwheat or shelled corn in bins, multiply inside length and width of bin together, then multiply product by average depth of grain in bin. This gives cubic feet, which divided by 5 and multiplied by 4 gives approximate number of bushels.

Handy Conversion Table

Multiply	By	To Get
Diam. circle	3.1416	Circumference circle
Diam. circle	0.886	Side of equal square
U. S. gallons	0.1337	Cubic feet
Cubic feet	62.428	Pounds of water
U. S. gallons	8.336	Pounds of water

To get results in left column, beginning with right column, divide by center column.

To Compute Wagon Capacity

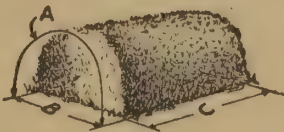
Multiply together length, breadth and depth in inches and divide by 2150; the result is the number of bushels of shelled grain.

Cubic Feet per Ton

Many factors affect the density of hay in the stack and therefore the number of cubic feet required for a ton of hay, but the figures in the following table, which are the averages obtained from a large number of stacks, can be used with fairly good results.

No. of Cubic Feet of Hay to the Ton

Kind of hay	Length of time in stack	
	30 to 90 days	Over 90 days
Alfalfa	485 cu. ft. per ton	470 cu. ft. per ton
Timothy and timothy mixed	640 cu. ft. per ton	625 cu. ft. per ton
Wild	600 cu. ft. per ton	450 cu. ft. per ton



Quantity of Hay in a Rick

To determine with reasonable accuracy the number of tons of hay in a rick of average shape, multiply the over distance in feet (A) by the width (B), then the length (C), and then by 0.37.

Breeding

Better

Livestock

Better livestock is largely a matter of wise selection and skillful mating. While the best results come from years of experience, an understanding of breeding fundamentals will, on the average, pay worthwhile returns.

Selection

Selection is designed to correct faults, depending on the male to do it. Thus, if the female backs are not ideal, a sire with a very strong back should be selected. For practical purposes, it is best to depend on the immediate sire, rather than going back into his pedigree, as expert breeders may.

Only the best animals, with the good points of breed, well fed and cared for, should be bred. Poor females should not be bred merely because it "costs nothing." Their faults may crop out in later generations. It is much better to sell several of them and use the money to purchase a better animal.

Inbreeding

This method, also called close breeding or line breeding, is often much criticized. All sorts of bad results are attributed to it, many of them wrongly.

It is certain that progress in animal breeding began with inbreeding. Breeding related animals increases the probability that the offspring will be like the parents. It brings a rapid fixing of type and enables the breeder to get results quickly.

However, inbreeding is best practiced after a thorough study of ancestors. Used unwisely, it may perpetuate faults.

Outcrossing

Mating two strains not closely related usually results in increasing size and vigor, if the parents are good animals. This is also true when both lines are inbred.

In fact, the breeder should prefer inbred



sires. If good representatives of their strain, they will usually produce offspring better than themselves and are much more likely to reproduce themselves than are sires from unrelated parents.

Pure Breeding

This is a business requiring much study and long practice. It requires an intensive knowledge of pedigrees, the ability to judge the merits of animals by appearance, and extensive experience in the probable result of matings.

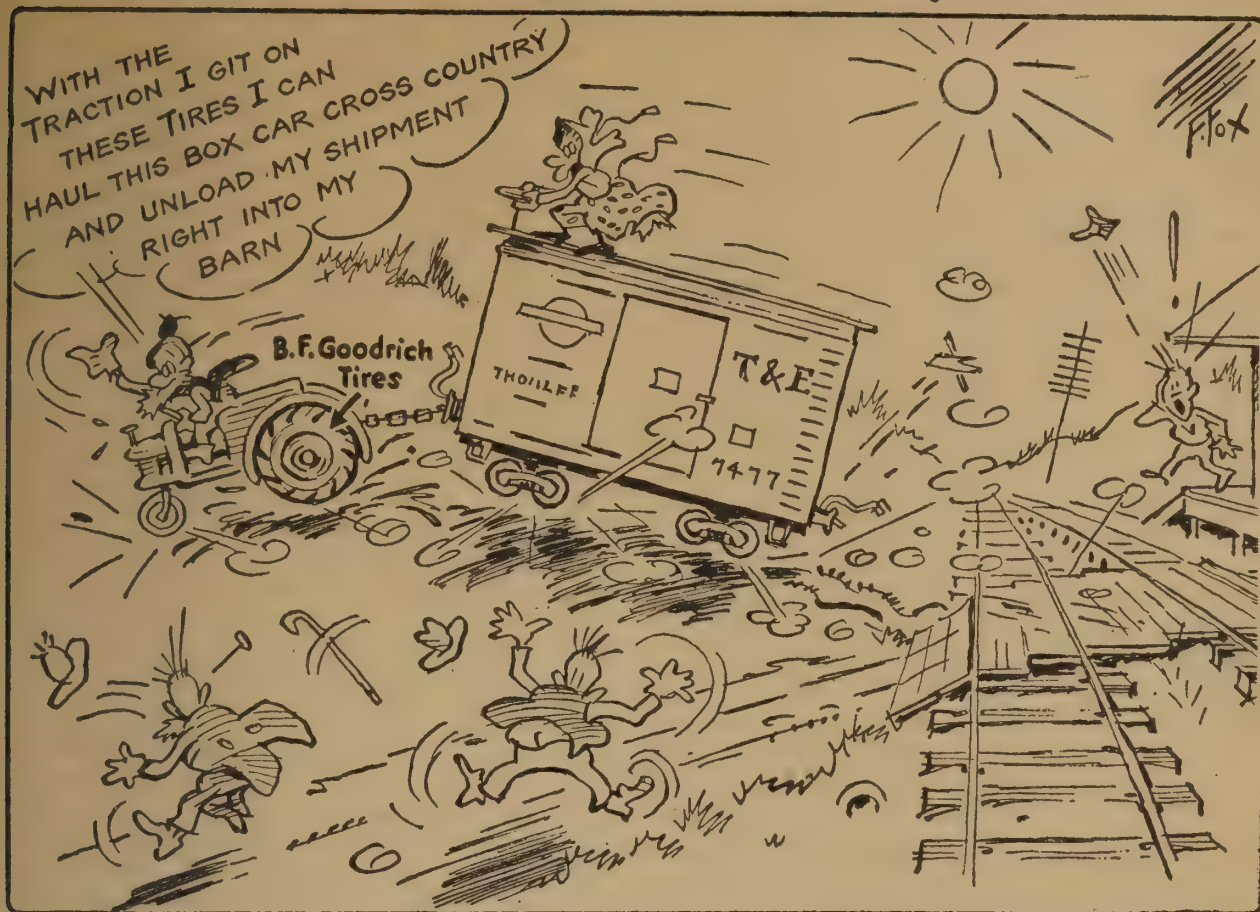
The farmer who does not want to make breeding a business is much better off to employ a consistent process of "grading up." He can acquire purebred sires and mate them to his native stock. The first cross is usually a noticeable improvement.

Males of the same breed should be used, cross after cross. This will result, in a short time, in practically purebred stock, although not eligible to registration.

Crossbreeding, by which purebred animals of different breeds of the same species are mated, should be used only by the skilled breeder. Because of extremely uncertain results, the average farmer should not practice crossbreeding, except for market animals.

SPEAKING OF TRACTION

—by Fontaine Fox



Plumbing Repairs *You* Can Make

Faucets

Seat washers in faucets wear out frequently and are so easily replaced that no instructions are necessary. If standard fibre or rubber washers are not available, substitute washers may be cut from leather, rubber or sheet packing.

Worn or grooved faucet seats will cause the faucet to leak even after a new washer is inserted. These may be ground smooth by using the simple seat dressing tool illustrated, obtainable at most hardware dealers. This is screwed into the faucet in place of the faucet stem and rotated gently several times so that the cutter on the bottom levels the seat.

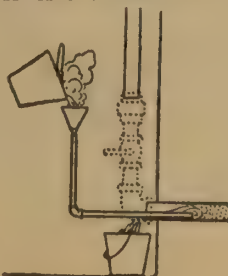
Top washers do not often require replacing. Sometimes there are metal washers above, as well as below them. If no standard top washer is available, the space it occupies may be packed by winding with



candle wicking, soft twine or the graphited cord packing used in power pumps. If wicking or string is used it should be soaked with tallow or machine grease to repel water. The packing should be just tight enough to prevent leakage. If too tight, the faucet will be hard to turn.

Frozen Pipes

Frozen pipes are best thawed with boiling water or hot cloths. A blow torch or paper torch may give quicker results but must be handled carefully to avoid fire. Always work from the unfrozen end toward the water supply end. Do not start in the middle.



Frozen underground pipes are best thawed by uncoupling the building end and inserting a smaller pipe, into which hot water may be poured, as shown in the diagram at the left.

Koroseal*

What it is!

Koroseal is the flexible, waterproof material developed by B. F. Goodrich from limestone, coke and salt. It resists grease, oil, most chemicals, and stains, sun, air and wear, and can be produced in practically any color. It is used as a coating for paper or fabric; as a transparent film or sheet; and can be made into tubing or almost any other imaginable shape.

Many Home Uses

These many fine qualities make Koroseal ideal for dozens of articles for home use — for shower curtains, aprons, and umbrellas — food dish coverings — for featherweight rain clothing that won't get sticky even if rolled up wet — for table cloths and wall coverings that can be wiped clean with a damp cloth — for work clothes that resist acid and grease — for comfortable, waterproof baby pants.

Right now practically all Koroseal goes into war production. War has taught many new uses for it, and B. F. Goodrich has continued its development. It will be back soon and you can again enjoy Koroseal.

KOROSEAL—REG. T.M.

**See page 28 for examples of Koroseal-treated products.*

seal products not now available — plus many new ones. Among Koroseal products planned for you are upholstering you can wash or leave out in the rain — softer baby pants — durable luggage — lightweight, easily disposed of packages for soup, milk, oil or any liquid — shoe soles that last three times as long as leather!

Used in Industry, Too

There are many industrial uses for Koroseal. As one example, in a plant doing chrome plating of metal airplane parts, the tank holding the acid solutions was lined with Koroseal; this gave better control of the plating process, and the acids that would have destroyed rubber lining had no effect on Koroseal. Other applications of Koroseal include "wrapping" for oil pipelines, as beverage hose in bottling plants, for factory workers' clothing and other uses.

There will be other time-and-money-saving uses for Koroseal in the home, on the farm and in industry — because there's no other product quite like it.



Waterproof, weather-resistant clothes — because of Koroseal.

Airline Distances from U. S. Cities to World Points

All Distances are Approximate in Statute Miles

	Berlin Germany	Cairo Egypt	Calcutta India	Cape Town Un. of S. A.	Casablanca Morocco	Chungking China	Dutch Harbor Alaska	Pearl Harbor	Guadalcanal Solomon Is.	London England	Manila P. I.	Moscow Russia	Natal Brazil	Paris France	Panama	Reykjavik Iceland	Rome Italy	Shanghai China	Sydney Australia	Tehran Iran	Tokyo Japan
Atlanta, Ga.	4800	6500	8750	8250	4450	8250	4200	4575	8225	4300	8875	5550	4250	4475	1750	3400	5150	7850	9450	7100	7050
Bismarek, N. D.	4650	6475	7925	9375	4800	7075	2950	3700	7250	4275	7625	5100	5425	4500	2900	3150	5175	6625	8800	6650	5750
Boston, Mass.	3850	5575	7950	7775	3500	7650	4275	5175	8800	3325	8600	4600	4025	3500	2375	2475	4175	7550	10300	6100	6900
Buffalo, N. Y.	4150	5875	8050	8150	3900	7700	3825	4775	8400	3625	8450	4825	4350	3825	2325	2700	4500	7350	9900	6350	6675
Chicago, Ill.	4500	6300	8200	8550	4350	7650	3675	4300	7950	4050	8300	5050	4575	4150	2300	2950	4825	7100	9125	6550	6400
Cleveland, O.	4250	6050	8100	8150	4050	7700	3900	4575	8200	3775	8400	4900	4350	3950	2250	2850	4550	7200	9500	6400	6600
Dallas, Tex.	5300	6950	8800	8750	5100	8050	3700	3850	7400	4850	8425	5900	4850	5050	1950	3850	5675	8475	8675	7425	6550
Denver, Colo.	5150	6950	8200	9300	5200	7350	3050	3350	6950	4775	7775	5600	5400	4975	2650	3650	5675	6800	8350	7150	5850
Detroit, Mich.	4300	6050	8075	8250	4100	7700	3825	4500	8050	3850	8225	5000	4450	4025	2300	2900	4700	7350	9550	6475	6500
El Paso, Tex.	5650	7425	8750	9250	5550	7825	3350	3275	6850	5225	8050	6150	5300	5425	2325	4150	6100	7275	8100	7800	6325
Helena, Mont.	4950	6775	7675	9700	5250	6800	2500	3125	6675	4650	7175	5250	5875	4850	3225	3500	5500	6325	8225	6825	5350
Jacksonville, Fla.	4850	6550	8850	7875	4325	8425	4450	4850	8325	4325	9075	5625	4000	4500	1450	3525	5150	8050	9450	7050	7350
Kansas City, Mo.	4850	6750	8325	8800	4725	7650	3475	3925	7550	4425	8175	5400	4875	4600	2250	3350	5300	7175	8900	6925	6300
Los Angeles, Calif.	5825	7700	8225	9950	6050	7375	2725	2550	6150	5575	7325	6125	6025	5775	3000	4475	6375	6550	7525	7700	5500
Louisville, Ky.	4575	6275	8325	8300	4300	7800	3875	4375	8000	4100	8475	5225	4400	4300	2000	3100	4950	7425	9350	6750	6650
Memphis, Tenn.	4875	6600	8575	8450	4600	8000	3850	4200	7800	4375	8550	5500	4500	4575	1850	3400	5250	7500	9100	7000	6675
Miami, Fla.	5025	6550	9200	7650	4350	8800	4725	4900	8400	4475	9400	5825	3700	4625	1175	3700	5250	8350	9400	7225	7650
New Orleans, La.	5200	6850	8900	8300	4750	8300	4125	4250	7850	4650	8800	5850	4350	4850	1600	3725	5525	7800	8950	7325	6950
New York, N. Y.	4000	5700	8000	7800	3650	7700	4200	5000	8700	3475	8575	4750	4000	3650	2150	2600	4325	7475	9950	6200	6850
Oklahoma City, Okla.	5175	6950	8575	8900	4975	7800	3500	3725	7350	4700	8250	5700	4950	4900	2125	3675	5550	7300	8650	7250	6400
Omaha, Neb.	4775	6550	8150	8950	4725	7450	3300	3825	7450	4350	8025	5300	4975	4550	2425	3250	5225	6975	8850	6850	6125
Philadelphia, Pa.	4050	5800	8100	7900	3725	7775	4150	4950	8600	3550	8600	4825	4025	3750	2100	2700	4400	7500	10000	6300	6850
Phoenix, Ariz.	5725	7550	8450	9675	5750	7550	3000	2900	6500	5325	7700	6100	5650	5525	2650	4200	6225	6950	7850	7650	5850
Portland, Ore.	5250	7050	7500	10300	5700	6550	2025	2575	6150	5000	6750	5450	6350	5200	3600	3800	5875	5875	7700	6975	4900
Portland, Me.	3700	5450	7825	7750	3400	7500	4155	5225	8700	3200	8425	4450	4025	3375	2425	2325	4050	7300	10200	5950	6750
Raleigh, N. C.	4400	6100	8450	7950	3975	8025	4270	4850	8450	3900	8825	5150	3950	4075	1800	3025	4725	7750	9700	6625	7050
St. Paul, Minn.	4450	6350	7900	8875	4450	7250	3250	4000	7600	4025	7875	4975	4975	4225	2600	2950	4925	6850	9050	6550	6050
Salt Lake City, Utah	5300	7125	8050	9775	5450	7150	2700	2975	6650	4950	7400	5650	5800	5250	2925	3775	5850	6500	8100	7200	5575
San Antonio, Tex.	5575	7375	9100	8825	5300	8250	3800	3700	7250	5125	8550	6200	4850	5325	1800	4125	6000	7650	8425	7750	6700
San Francisco, Calif.	5700	6550	7900	10300	6050	6950	2350	2400	6000	5425	7025	5950	6250	5625	3300	4250	6300	6250	7450	7500	5225
Seattle, Wash.	5075	6900	7350	10325	5600	6400	1950	2700	6200	4825	6700	5250	6350	5025	3650	3625	5700	5800	7800	6750	4850
Washington, D. C.	4175	5875	8200	7950	3825	7850	4175	4875	8500	3675	8650	4925	4050	3850	2050	2825	4525	7600	9900	6400	6850

Rates of Pay for Army and Marine Corps

RANK	MONTHLY BASE PAY	TOTAL ANNUAL PAY with allowances	
		without dependents	with dependents
General	\$ 666	\$ 11,712	\$ 12,144
Lieutenant General	666	10,012	10,444
Major General	666	9,512	9,944
Brigadier General	500	7,512	7,944
Colonel	333	5,512	5,944
Lieutenant Colonel	291	5,012	5,696
Major	250	4,332	5,016
Captain	200	3,552	3,984
First Lieutenant	166	2,972	3,404
Second Lieutenant, Flight or Warrant Officer (J.G.)	150	2,592	3,024
Chief Warrant Officer	175	3,072	3,504
Master Sergeant	138		
First or Technical Sergeant	114		
Staff Sergeant, Technician 3rd G.	96	Allowances for these ranks vary with number of dependents and other factors	
Sergeant, Technician 4th G.	78		
Corporal, Technician 5th G.	66		
Private, First Class	54		
Private	50		

Rates of pay shown are minimum. Pay of all ranks below Brigadier General increases with length of service.

There are a number of warrant officer ranks with pay rates varying slightly from those listed.

Commissioned officers are paid 10% for foreign service, 50% extra for flying duty. Non-commissioned officers and men are

paid 20% extra for foreign service. They also receive additional pay for certain qualifications and for holding certain medals. Warrant officers receive 50% extra for flying duty.

Rates of pay for the Women's Army Corps and the Marine Corps Women's Reserve are the same as in the Army. Army nurses are paid the same as their equivalent rank in the Army.

**PRINCIPAL
MEDALS and DECORATIONS
OF THE ARMED FORCES
OF THE UNITED STATES**



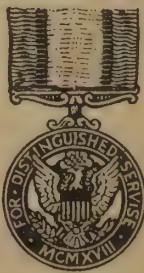
**MARINE CORPS
BREVET MEDAL**
For holders of Presidential
Commissions



**DISTINGUISHED SERVICE
CROSS (Army)**
For extraordinary heroism



NAVY CROSS
For extraordinary heroism



**DISTINGUISHED SERVICE
MEDAL (Army)**
For meritorious service



**DISTINGUISHED SERVICE
MEDAL (Navy)**
For meritorious service



**CONGRESSIONAL MEDAL
OF HONOR (Army)**
Highest award for gallantry in action



**CONGRESSIONAL MEDAL
OF HONOR (Navy)**
Highest award for gallantry in action

Rates of Pay for Navy and Coast Guard

RANK	MONTHLY BASE PAY	TOTAL ANNUAL PAY with allowances	
		without dependents	with dependents
Admiral	\$ 666	\$ 11,712	\$ 12,144
Vice Admiral	666	10,012	10,444
Rear Admiral (Upper Half)	666	9,512	9,944
Rear Admiral (Lower Half)	500	7,512	7,944
Commodore, Captain	333	5,512	5,944
Commander	291	5,012	5,696
Lieutenant Commander	250	4,332	5,016
Lieutenant	200	3,552	3,984
Lieutenant (Junior Grade)	166	2,972	3,404
Ensign	150	2,592	3,024
Chief Warrant Officer, Commissioned	175	3,072	3,504
Warrant Officer	150	2,592	3,024
Chief Petty Officer	138		
Chief Petty Officer (Temporary)	126		
Petty Officer, 1st Class	114	Allowances vary with number of dependents and other factors	
Petty Officer, 2nd Class	96		
Petty Officer, 3rd Class	78		
Seaman, 1st Class	66		
Seaman, 2nd Class	54		
Seaman, 3rd Class	50		

Rates of pay shown are minimum. Pay of all ranks below Rear Admiral increases with length of service.

Certain specialists among Petty Officers and non-rated men receive pay of higher classifications.

Commissioned officers receive 10% additional pay for sea duty or foreign service and 50% additional for flying duty. Warrant officers also receive 50% extra for

duty involving flying.

Non-commissioned men receive 20% additional pay for sea duty or foreign service.

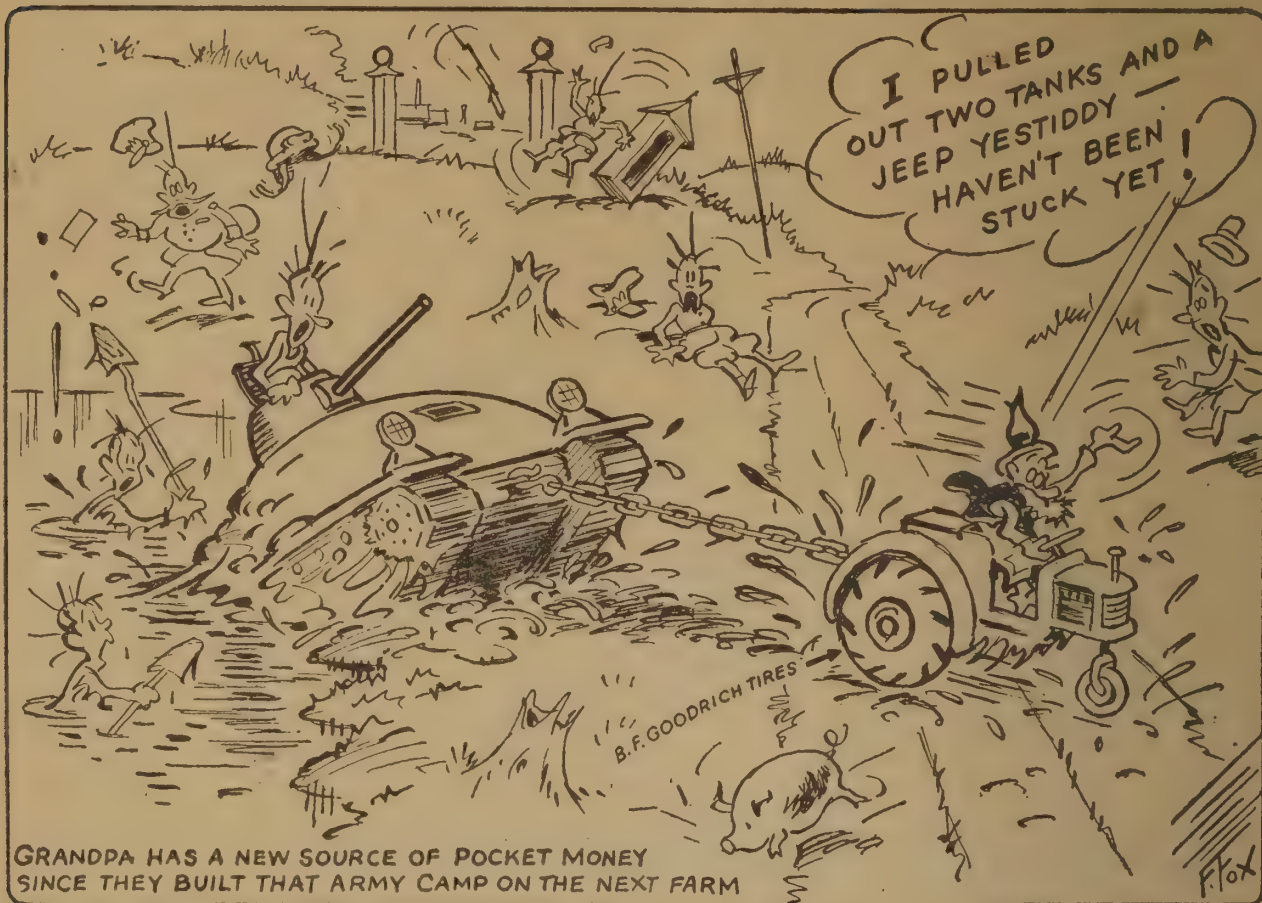
Navy nurses receive the same pay and allowances as ensigns, with increases for length of service and promotions.

Rates of pay for the Women's Reserve, U.S.N.R. (Waves) and for the Women's Reserve of the Coast Guard Reserve (Spars) are the same as for the Navy.

 LEGION OF MERIT For outstanding service in U. S. or Allied armed forces	 SILVER STAR (All U. S. Armed Forces) For gallantry in action	 DISTINGUISHED FLYING CROSS For heroism in the air	 SOLDIERS MEDAL (Army) For heroism not involving conflict	 NAVY AND MARINE CORPS MEDAL For heroism not involving combat
 BRONZE STAR (All U. S. Armed Forces) For heroic achievement	 AIR MEDAL (All U. S. Armed Forces) For achievement in the air	 PURPLE HEART (All U. S. Armed Forces) For wounds in action	 (Navy) PRESIDENTIAL UNIT CITATION For outstanding unit performance in action	 (Army) ORGANIZATION BLUE UNIT CITATION For outstanding unit performance in action

SPEAKING OF TRACTION

—by Fontaine Fox



Corn Husking Champions of Last 18 Years

Year State	Champion	Wt. of Corn	Wt. of Glean.	Deduct Glean.	Wt. of Husks	Deduct Husks	Total Deduct.	Net Corn	Bush-els
1924-Iowa	Fred Stanek, Ia.	1,891	21	42	6	144	186	1,705	24.3
1925-Ill.	Elmer Williams, Ill.	2,590	28.25	56.5	4 6/16	29.14	85.64	2,504.36	35.8
1926-Neb.	Fred Stanek, Ia.	2,158	12.25	36.75	4	—	36.75	2,121.25	30.3
1927-Minn.	Fred Stanek, Ia.	1,180	25.5	76.5	5 12/16	20.06	96.56	1,083.44	15.47
1928-Ind.	Walter Olson, Ill.	1,982	19.5	58.5	7	56.46	117.96	1,864.04	26.62
1929-Mo.	Walter Olson, Ill.	1,860	21	63	6 8/16	27.9	90.9	1,769.91	25.27
1930-Kan.	Fred Stanek, Ia.	2,160	8.25	24.75	5 8/16	10.8	35.55	2,124.45	30.34
1931-Iowa	Orville Welch, Ill.	2,255	7.5	22.5	6 6/10	36.1	58.5	2,196.4	31.37
1932-Ill.	Carl Seiler, Ill.	2,605	7	21	4 10/16	—	21	2,584	36.91
1933-Neb.	S. Hendrickson, Neb.	2,075	20.75	62.25	8 13/16	79.06	141.31	1,933.69	27.62
1934-Minn.	Ted Balko, Minn.	1,825	3	9	5 9/16	10.95	19.95	1,805.05	25.79
1935-Ind.	Elmer Carlson, Ia.	2,995	14.5	43.5	6 8/16	44.9	88.4	2,906.6	41.52
1936-Ohio	Carl Carlson, Ia.	1,540	10.25	30.75	7 6/16	36.5	67.25	1,472.75	21.04
1937-Mo.	Ray Hanson, Minn.	1,760	7	21	12 4/16	242	263	1,497	21.385
1938-S. D.	Ted Balko, Minn.	1,620	21	63	3 12/16	—	63	1,557	22.24
1939-Kan.	Lawr. Pitzer, Ind.	2,070	18	54	6 4/16	28.98	82.98	1,987.02	28.39
1940-Iowa	Irvin Bauman, Ill.	3,350	29.7	89.1	3 7/16	—	89.1	3,260	46.71
1941-Ill.	Floyd Wise, Ill.	3,260	28	84	4 2/16	0	84	3,176	45.371

Courtesy of the Prairie Farmer

FREE — To Truck Owners

B. F. Goodrich has published a 100 page Operators Handbook for the use of truck owners. It tells how to select the right tire for the job, how to get more mileage out of your tires, how to care for synthetic tires, and other useful information. Ask us for a free copy.

Making Fertilizer from Waste Materials

The successful farmer works constantly to maintain soil fertility. For that reason, he usually adds composts to his list of fertilizers. While composts may not provide large amounts of fertilizer, they utilize wastes and do not involve too much labor if handled methodically.

Making Composts

"Natural" composts usually are made of alternate layers of stable manure and waste absorbent materials, such as leaves, peat, muck and sod. If possible, half of the pile should be manure, but smaller quantities will inoculate the pile with the necessary bacteria.

Before use, the pile should be kept as moist as possible and turned several times to mix it thoroughly.

Composts should be left until well rotted before use. If fine material is desired, as in setting out small plants, the compost may be screened. Parts not passing through the screen may be added to a new compost pile.



Chemical Composts

Using chemicals permits the rapid production of composts of predetermined fertilizer value.

The most popular common decomposition chemical is sulphate of ammonia. This is often used at a rate of 60 to 70 pounds per ton of straw or dry material. Other chemicals, such as ground limestone, super-

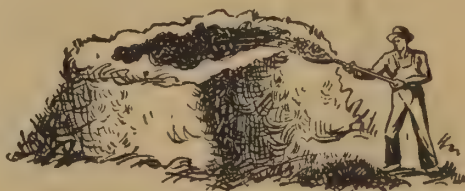
phosphate, muriate of potash, bone meal, etc. may be added. There are several patented compost chemicals.

Since the exact composition of chemical composts depends on soil requirements, you should obtain the advice of your county agent or your nearest experimental station.

In making composts with chemicals, the straw or dry materials are placed in layers about one foot thick, and some of the chemicals applied between each layer. The pile is kept moist during the process. Since moisture is necessary for proper functioning of the chemicals, the pile should be made concave so that it will retain water.

The correct use of chemicals has produced decomposed material, with the properties of manure, in as little as three months. In addition, the use of chemicals permits the saving of manure for special purposes.

However, if conditions do not warrant the time and expense of making a carefully constructed compost pile, a heap of manure and compost material can be made and left to weather. This will give a useful fertilizer with a minimum of cost and labor.



Some Waste Materials Suitable for Composts

Animal Entrails

Banana Peelings

*Coal Ashes

Coffee Grounds

Corn cobs, ground and charred

Dried Blood

Duck manure

Fish scrapings and entrails

Flowers and stems

Fruit Skins

Goat Manure

Grass

Green Forage

Ground Bone

Hay

House and Barn Sweepings

Kitchen Wastes

Leaves

Meat Scraps

Pea Pods

Pidgeon Manure

Poultry Manure

Rabbit Manure

Sewage Sludge

Sheep Manure

Soot

Spoiled Feeds

Spoiled Fruits

Spoiled Vegetables

Tankage

Tea grounds

Tobacco leaves and stalks

Vegetable Rinds

Vegetable Tops

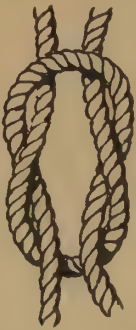
Weeds

Wood Ashes

**Little value as fertilizer but useful for loosening heavy soils.*

KNOTS *and* SPLICES

SQUARE KNOT



For tying two ropes

SLIP KNOT



For hitching

BOWLINE



A non-slip loop

TWO HALF HITCHES



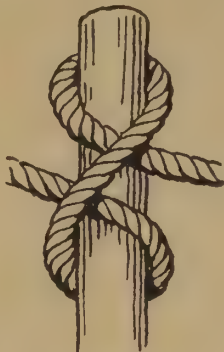
For tying to rings

TIMBER HITCH



For hauling timber

CLOVE HITCH



For tying to a post

SHEEPSHANK



To shorten a rope

FISHERMAN'S KNOT



For tying stiff thin lines

PIPE HITCH



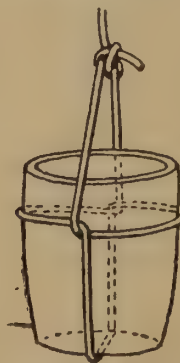
For lifting pipe

DOUBLE BLACKWALL HITCHES



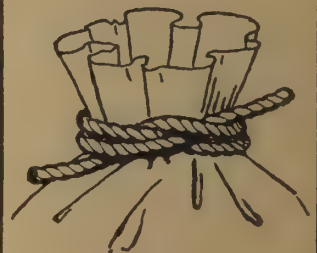
For tying a rope to a hook

BARREL SLING



To hoist a barrel

MILLER'S KNOT

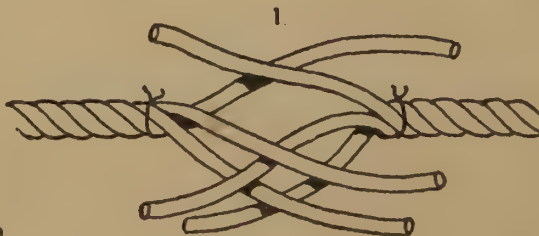


To tie a bag

SHORT SPLICE



2



For permanently joining two ropes of the same size. With ends cut clean, untwist the ropes four or five turns and tuck the strands of each rope over the other, alternately. After obtaining figure 3, cut off the loose ends and roll under pressure to flatten the splice.



3.

Position of opposite ropes



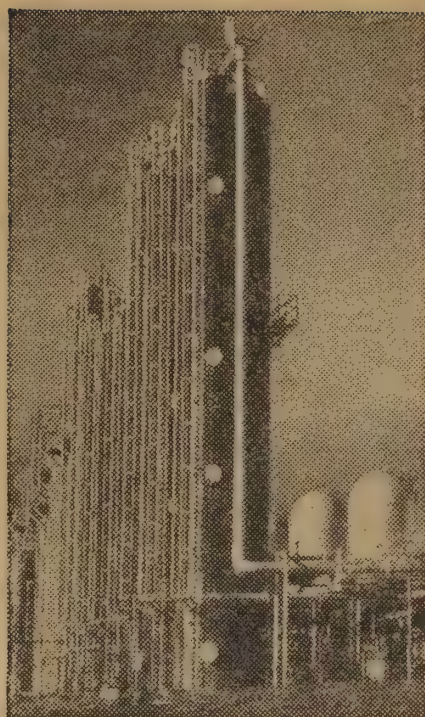
The *Miracle* of Synthetic Rubber

The building of a gigantic synthetic rubber industry in the United States during the two years following the Japanese attack on Pearl Harbor will go down in world industrial history as one of the amazing accomplishments of World War II.

After December 7, 1941, the country was faced with many grave problems. One of the most serious was the rubber supply. The United States, the world's greatest rubber consumer, was completely cut off from its Far East sources of supply. Fortunately, due to the foresight of the rubber industry and the government, a backlog of rubber had been accumulated amounting to approximately 600,000 long tons. While this stockpile represented only a year's normal peacetime consumption, it was restricted and conserved to bridge the gap between the time our supply was cut off and synthetic rubber plants were built and in full operation.

Overnight America's rubber industry tackled two staggering problems. First, to build plants to produce enormous quantities of synthetic rubber; second to devise ways and means to use and adapt synthetic rubber to current needs, and also to overwhelming new war needs.

But the nation's rubber industry was not found completely wanting in experience and "know how" in producing synthetic rubber. Back in October, 1937, B. F. Goodrich, after eleven years of research, had begun operation of a pilot plant for the production of synthetic rubber for tires. B. F. Goodrich was the first American company to produce a tire-type rubber commercially, and before the government plants were built, was making more than all the rest of the nation combined. In June, 1940, after a 14-year research program — The B. F. Goodrich Company



introduced Ameripol synthetic rubber and sold tires in which Ameripol was used. Hundreds of these tires were purchased and used across the country under all sorts of driving conditions — rolling up 80 million miles of usage which was carefully checked by B. F. Goodrich engineers.

During 1940, B. F. Goodrich furthered its developments, producing the first conveyor belting made of Ameripol, building airplane tires containing synthetic rubber, enlarging its synthetic rubber plants, and in July, 1941, produced the first synthetic bus tires.

After Pearl Harbor, B. F. Goodrich offered its experience and many patents to the government royalty-free. The government announced a program for the annual production of 400,000 tons of synthetic rubber, and later doubled this goal. Laboratories worked 'round the clock and plant construction went on night-and-day schedules. Even before the government plants were built, B. F. Goodrich was producing more synthetic rubber than the rest of the industry combined. In two years — 1942 to 1944 — an industrial miracle took place; production of all types of synthetic rubber leaped from 1942's 25,000 long tons to 1944's 750,000 long tons — more than the amount of crude rubber America ever consumed in a peacetime year. Hard work, backed by experience, had saved the day and set the stage for the future.

How to Forecast the *Weather*

You can forecast the weather almost as accurately as the weather bureau if you have a good barometer. An accurate, plain instrument of the aneroid type, is far better than an ornate complicated device. And the very cheap barometers, which attempt to indicate rain, change, etc., are almost useless.

A barometer indicates atmospheric pressure. It is not read like a thermometer, but by observing whether it is rising, falling or steady. These observations, plus the wind direction, permit a reasonably accurate weather forecast.

The following table provides a basis on which to plan your forecasts. It is true for most parts of the country but you must learn by experience, your local weather peculiarities.



An accurate aneroid barometer, adjusted for your locality, is the first essential to accurate weather forecasting.

Since winds affect weather, a well oiled weather vane should be placed as high as possible, where buildings or trees will not obstruct it.

BAROMETER

WIND

FORECAST

High, steady	Westerly	Continued fair, little temperature change
High, rising rapidly	Westerly	Fair, rain within two days
High, falling slowly	Westerly	Fair, becoming warmer
High, falling slowly	South or southeast	Rain within one day
High, falling rapidly	South or southeast	Increasing wind, rain within one day
High, falling slowly	Easterly	Rain in 18 hours or less
High, falling rapidly	Easterly	Increasing wind, rain in 18 hours or less
High, falling slowly	East or northeast	Light winds, rain within 2 days probable
High, falling rapidly	East or northeast	Increasing winds, rain in 12 hours or less
Low, falling slowly	Easterly	Continued rain for at least one day
Low, falling rapidly	Easterly	Rain and wind, clearing in 2 days or less
Low, Rising slowly	South or southwest	Clearing quickly, continued fair to follow
Low, falling rapidly	South or east	Heavy storm very soon, clearing in 1 day
Low, falling rapidly	East or north	Gale and rain, turning colder
Low, rising rapidly	Turning westerly	Clearing quickly, probably colder

NOTE: The word "rain" has been used to indicate precipitation, which may be rain or snow, depending on the season and locality.

Weather Proverbs

Many of these old weather sayings have sound basis in scientific fact. They will help you foretell the immediate weather.

Evening red and morning grey,
Two sure signs of a fine day.
Evening grey and morning red
Send the shepherd wet to bed.

Mackerel sky, twelve hours dry.

The higher the clouds, the finer the weather.

When clouds appear like rocks and towers,
The earth's refreshed by frequent showers.

Winds that change against the sun
Are always sure to backward run.

Sunshine and showers, rain again
tomorrow.

When the wind is in the east,
It's neither good for man nor beast.

When the dew is on the grass,
Rain will never come to pass.

When grass is dry at morning light,
Look for rain before the night.

Rain from the south prevents the drought,
But rain from the west is always best.

Astronomical Calculations for 1945

ECLIPSES FOR 1945

There will be four eclipses in 1945, two of the Sun and two of the Moon.

I: An Annular Eclipse of the Sun, January 14th, invisible here.

II: A Partial Eclipse of the Moon, June 25th, invisible here.

III: A Total Eclipse of the Sun, July 9th, visible to North America as a total or partial eclipse, the path of totality extending from western part of the United States, through Canada across the Hudson Bay and Greenland. Eclipse begins 6:00 A.M. Eastern Standard Time.

IV: A Total Eclipse of the Moon, December 18-19th, visible generally in North America, South America, southeastern part of the Pacific Ocean, the Atlantic and Arctic Oceans, Europe, Africa, parts of Asia and the western part of the Indian Ocean.

MORNING AND EVENING STARS, 1945

The Planet Venus (♀) is Evening Star to April 15th, then Morning Star to end of year.

The Planet Mars (♂) is Morning Star throughout the year.

The Planet Jupiter (♃) will be Morning Star until March 13th, then Evening Star to October 1st and Morning Star then again until end of year.

The Planet Saturn (♄) is Evening Star to July 6th, then Morning Star balance of year.

SEASONS FOR 1945

Eastern Standard Time

☉ enters ♈, Spring begins March 20d. 6h. 38m. Eve.

☉ enters ☊, Summer begins June 21d. 1h. 52m. Eve.

☉ enters ♏, Autumn begins Sept. 23d. 4h. 50m. Morn.

⊙ enters 𐄂, Winter begins Dec. 22d. oh. 4m. Morn.

Explanation of the Calendar Pages

The sun and moon *rise and set* times are given in Standard Time for the *latitudes* of New York (North) and Charleston (South). They are correct for these latitudes at each Standard Time Meridian of longitude but will vary a few minutes if you are north or south of these latitudes, or east or west of your Time Meridian. Only moon *rise and set* times which occur in the hours of darkness are given. The sun *slow or fast* column indicates the difference between mean (Standard) solar time and apparent solar time. "Sun Slow 4" shows that the sun will not arrive at the Time Meridian until 12:04. The Moon's Place column indicates which constellation the moon is in on the date given.

1945	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	1945	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
JAN.	...	1	2	3	4	5	6	JULY	1	2	3	4	5	6	7
	7	8	9	10	11	12	13		8	9	10	11	12	13	14
	14	15	16	17	18	19	20		15	16	17	18	19	20	21
	21	22	23	24	25	26	27		22	23	24	25	26	27	28
	28	29	30	31	...	...	...		29	30	31	...	...	...	...
FEB.	...	...	...	...	1	2	3	AUG.	...	...	...	1	2	3	4
	4	5	6	7	8	9	10		5	6	7	8	9	10	11
	11	12	13	14	15	16	17		12	13	14	15	16	17	18
	18	19	20	21	22	23	24		19	20	21	22	23	24	25
	25	26	27	28	...	...	...		26	27	28	29	30	31	...
MAR.	...	...	...	...	1	2	3	SEP.	...	...	...	...	...	...	1
	4	5	6	7	8	9	10		2	3	4	5	6	7	8
	11	12	13	14	15	16	17		9	10	11	12	13	14	15
	18	19	20	21	22	23	24		16	17	18	19	20	21	22
	25	26	27	28	29	30	31		23	24	25	26	27	28	29
APR.	...	...	...	...	...	...	...		30	...	...	...	...	...	...
	1	2	3	4	5	6	7	OCT.	...	1	2	3	4	5	6
	8	9	10	11	12	13	14		7	8	9	10	11	12	13
	15	16	17	18	19	20	21		14	15	16	17	18	19	20
	22	23	24	25	26	27	28		21	22	23	24	25	26	27
	29	30	...	...	...	...	...		28	29	30	31	...	...	...
MAY	...	...	1	2	3	4	5	NOV.	...	...	...	...	...	...	1
	6	7	8	9	10	11	12		4	5	6	7	8	9	10
	13	14	15	16	17	18	19		11	12	13	14	15	16	17
	20	21	22	23	24	25	26		18	19	20	21	22	23	24
	27	28	29	30	31	...	...		25	26	27	28	29	30	...
JUNE	...	...	...	...	...	1	2	DEC.	...	...	...	...	...	...	1
	3	4	5	6	7	8	9		2	3	4	5	6	7	8
	10	11	12	13	14	15	16		9	10	11	12	13	14	15
	17	18	19	20	21	22	23		16	17	18	19	20	21	22
	24	25	26	27	28	29	30		23	24	25	26	27	28	29
	...	...	...	...	...	...	...		30	31	...	...	...	...	...

1946	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	1946	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
JAN.	...	1	2	3	4	5		JULY	...	1	2	3	4	5	6
	6	7	8	9	10	11	12			7	8	9	10	11	12
	13	14	15	16	17	18	19			14	15	16	17	18	19
	20	21	22	23	24	25	26			21	22	23	24	25	26
	27	28	29	30	31	.....				28	29	30	31	.....	
FEB.					1	2		AUG.					1	2	3
	3	4	5	6	7	8	9			4	5	6	7	8	9
	10	11	12	13	14	15	16			11	12	13	14	15	16
	17	18	19	20	21	22	23			18	19	20	21	22	23
	24	25	26	27	28	.....				25	26	27	28	29	30
MAR.					1	2		SEP.							
	3	4	5	6	7	8	9			1	2	3	4	5	6
	10	11	12	13	14	15	16			8	9	10	11	12	13
	17	18	19	20	21	22	23			15	16	17	18	19	20
	24	25	26	27	28	29	30			22	23	24	25	26	27
	31	.....								29	30	.....			
APR.		1	2	3	4	5	6	OCT.				1	2	3	4
	7	8	9	10	11	12	13			6	7	8	9	10	11
	14	15	16	17	18	19	20			13	14	15	16	17	18
	21	22	23	24	25	26	27			20	21	22	23	24	25
	28	29	30	.....						27	28	29	30	31	.....
MAY					1	2	3	NOV.						1	2
	5	6	7	8	9	10	11			3	4	5	6	7	8
	12	13	14	15	16	17	18			10	11	12	13	14	15
	19	20	21	22	23	24	25			17	18	19	20	21	22
	26	27	28	29	30	31	...			24	25	26	27	28	29
JUNE						1		DEC.							
	2	3	4	5	6	7	8			1	2	3	4	5	6
	9	10	11	12	13	14	15			8	9	10	11	12	13
	16	17	18	19	20	21	22			15	16	17	18	19	20
	23	24	25	26	27	28	29			22	23	24	25	26	27
	30	.....	.....	.....	.....	.....	.....			29	30	31	.....	.....	.....

**3rd Month
31 Days**



For Easy Steering, Easy Turning
Get this New Style
FRONT WHEEL TRACTOR TIRE

This new B. F. Goodrich Tire reduces sideslip, holds ridges better. Its self-cleaning tread makes tractor steering practically as easy as automobile steering. Built for extra long life and trouble-free service.

MULTI-RING SILVERTOWN

Almanac for April, 1945 4th Month 30 Days

Days of Month	Days of Week	MOON'S PHASES, E. S. T.			MOON'S PLACE	LATITUDE of Northern States			SUN SLOW	LATITUDE of Southern States		
		Last Quarter, 2:18 P.M., 5th New Moon, 7:29 A.M., 12th First Quarter, 2:46 A.M., 19th Full Moon, 5:33 A.M., 27th				SUN rises	SUN sets	MOON rises		SUN rises	SUN sets	MOON rises
		H. M.	H. M.	H. M.		H. M.	H. M.	H. M.				
HISTORICAL EVENTS												
Easter Sunday					Day's Length: Northern 12.40; Southern 12.31							
1	Su	Prince Otto Von Bismarck born, 1815	♌	5 44 6 24 10 20	4	5 49 6 20	9 59					
2	Mo	Sergei Rachmaninoff, composer, born, 1873	♍	5 43 6 26 11 20	4	5 48 6 21	10 55					
3	Tu	1st Pony Express, 1860	♍	5 41 6 27 morn	3	5 46 6 21	11 51					
4	We	Senate passed war resolution, 1917	♎	5 39 6 28 0 20	3	5 45 6 22 morn						
5	Th	Danton, French leader; beheaded, 1794	♏	5 37 6 29 1 16	3	5 44 6 23 0 47						
6	Fr	Battle of Sailor's Creek, 1865	♏	5 36 6 30 2 10	2	5 43 6 23 1 41						
7	Sa	William Wordsworth, poet, born, 1770	♐	5 34 6 31 3 00	2	5 42 6 24 2 32						
Low Sunday					Day's Length: Northern 13.00; Southern 12.44							
8	Su	Battle of Sabine Cross Roads, 1864	♐	5 32 6 32 3 43	2	5 40 6 24 3 19						
9	Mo	La Salle reached Mississippi mouth, 1682	♑	5 31 6 33 4 21	2	5 39 6 25 4 03						
10	Tu	Joseph Pulitzer, publisher, born, 1847	♑	5 29 6 34 4 55	1	5 38 6 26 4 44						
11	We	Germany asks arms exports stopped, 1915	♒	5 27 6 35 5 28	1	5 36 6 26 5 22						
12	Th	First colonists reached Pacific Coast, 1811	♒	5 26 6 37 sets	1	5 35 6 27 sets						
13	Fr	Airbrake patent issued to Westinghouse, 1869	♓	5 24 6 38 8 13	1	5 34 6 28 7 58						
14	Sa	Fort Sumpter fell, 1861	♓	5 23 6 39 9 30	0	5 33 6 28 9 09						
3d Sunday after Easter					Day's Length: Northern 13.19; Southern 12.57							
15	Su	S.S. "Titanic" sunk; 1517 lives lost, 1912	♈	5 22 6 41 10 44	0	5 32 6 29 10 18						
16	Mo	Wilbur Wright, inventor, born, 1867	♈	5 20 6 42 11 52	F	5 31 6 30 11 23						
17	Tu	San Francisco earthquake, 1906	♉	5 18 6 43 morn	0	5 30 6 31 morn						
18	We	Richard Harding Davis, author, born, 1864	♉	5 16 6 44 0 53	1	5 28 6 31 0 22						
19	Th	Congress declared Cuba independent, 1898	♊	5 14 6 45 1 45	1	5 27 6 32 1 15						
20	Fr	N. Y. adopted State Constitution, 1777	♊	5 12 6 46 2 27	1	5 26 6 33 2 01						
21	Sa	Josh Billings, humorist, born, 1818	♋	5 11 6 47 3 03	1	5 25 6 33 2 41						
3d Sunday after Easter					Day's Length: Northern 13.38; Southern 13.10							
22	Su	Henry Fielding, writer, born, 1707	♋	5 10 6 48 3 35	1	5 24 6 34 3 17						
23	Mo	Steamer Great Western arrived in N. Y., 1838	♋	5 08 6 50 4 01	2	5 23 6 35 3 49						
24	Tu	Russia declared war on Turkey, 1877	♌	5 06 6 51 4 25	2	5 22 6 36 4 18						
25	We	Danbury, Conn. destroyed by British, 1777	♌	5 05 6 52 4 48	2	5 21 6 36 4 48						
26	Th	Lafayette sailed for America, 1777	♍	5 04 6 54 5 13	2	5 20 6 37 5 15						
27	Fr	Samuel F. B. Morse b., Charlestown, Mass., 1791	♍	5 02 6 55 rises	2	5 19 6 38 rises						
28	Sa	Lionel Barrymore, actor, born, 1878	♎	5 00 6 56 8 14	3	5 18 6 39 7 55						
4th Sunday after Easter					Day's Length: Northern 13.58; Southern 13.23							
29	Su	Czar of Russia decreed religious freedom, 1905	♎	4 59 6 57 9 14	3	5 16 6 39 8 50						
30	Mo	Battle of Jenkin's Ferry, 1864	♎	4 57 6 58 10 15	3	5 15 6 40 9 46						

B. F. Goodrich Silvertowns Last Longer . . . because

they are 3 years ahead. B. F. Goodrich sold tires made with synthetic rubber 3 years before any other manufacturer!

they are made with *Duramin* — the combination of chemicals that vitalizes rubber — toughens tires and makes them live longer.

they are made with *Hi-flex Cord* — even stronger than pre-war cord.

they are *Safety-Welded*. Tread is practically welded to tire carcass for longer life.



Almanac for May, 1945

5th Month
31 Days

Days of Month	Days of Week	MOON'S PHASES, E. S. T.	MOON'S PLACE	LATITUDE of Northern States			SUN FAST	LATITUDE of Southern States		
				SUN rises	SUN sets	MOON rises		SUN rises	SUN sets	MOON rises
				H. M.	H. M.	H. M.		H. M.	H. M.	H. M.
		☾ Last Quarter, 1:02 A.M., 5th ☾ New Moon, 3:21 P.M., 11th ☾ First Quarter, 5:12 P.M., 18th ☾ Full Moon, 8:49 P.M., 26th								
		HISTORICAL EVENTS								
1	Tu	Nasr-el-Din, Shah of Persia, assassinated, 1896	♌	4 56	6 59	11 14	3	5 14	6 41	10 43
2	We	Col. Fremont explored Rocky Mountains, 1842	♌	4 55	7 01	morn	3	5 13	6 42	11 37
3	Th	Disastrous fire in San Francisco, 1851	♌	4 53	7 02	0 08	3	5 12	6 42	morn
4	Fr	Napoleon arrived at Elba, 1814	♌	4 52	7 03	0 57	3	5 11	6 43	0 28
5	Sa	Battle of the Wilderness began, 1864	♌	4 51	7 04	1 42	3	5 10	6 44	1 16
Rogation Sunday				Day's Length: Northern 14.16; Southern 13.36						
6	Su	1st telephone conversation with ship at sea, 1916	♌	4 49	7 05	2 20	3	5 09	6 45	1 59
7	Mo	Poor Richard's Almanac 1st published, 1732	♌	4 48	7 06	2 54	3	5 08	6 45	2 39
8	Tu	Mount Ranier discovered, 1792	♌	4 47	7 07	3 26	4	5 07	6 46	3 16
9	We	Sir James M. Barrie, playwright, born, 1860	♌	4 46	7 08	3 57	4	5 06	6 47	3 52
10	Th	Fort Ticonderoga captured, 1775	♌	4 45	7 09	4 28	4	5 06	6 48	4 30
11	Fr	Americans captured Crown Point, 1775	♌	4 44	7 10	sets	4	5 05	6 48	sets
12	Sa	Henry Cabot Lodge, born, 1850	♌	4 43	7 11	8 19	4	5 04	6 49	7 55
Sunday after Ascension				Day's Length: Northern 14.31; Southern 13.47						
13	Su	1st English settlers in U. S., 1607	♌	4 41	7 12	9 32	4	5 03	6 50	9 04
14	Mo	Albert Einstein, scientist, born, 1879	♌	4 40	7 13	10 39	4	5 03	6 50	10 09
15	Tu	Panama Canal officially opened, 1914	♌	4 39	7 14	11 36	4	5 02	6 51	11 06
16	We	Battle of Champion Hills, 1863	♌	4 38	7 16	morn	4	5 01	6 52	11 56
17	Th	Plane N-C-4 reached Azores, 1919	♌	4 37	7 18	0 24	4	5 01	6 52	morn
18	Fr	Selective conscription enacted, 1917	♌	4 36	7 19	1 04	4	5 00	6 53	0 39
19	Sa	Electric fire alarm system patented, 1857	♌	4 35	7 20	1 39	4	4 59	6 54	1 17
Pentecost—Whit Sunday				Day's Length: Northern 14.46; Southern 13.56						
20	Su	John Stuart Mill, economist, born, 1806	♌	4 34	7 21	2 05	4	4 59	6 55	1 51
21	Mo	Glenn Curtiss, aviator, born, 1878	♌	4 33	7 22	2 31	4	4 58	6 55	2 21
22	Tu	Aaron Burr tried at Richmond, 1807	♌	4 32	7 23	2 55	3	4 57	6 56	2 50
23	We	Battle at Front Royal, 1862	♌	4 31	7 24	3 18	3	4 57	6 57	3 19
24	Th	1st passenger railroad in U. S. opened, 1830	♌	4 31	7 25	3 41	3	4 56	6 57	3 49
25	Fr	U. S. repaid Boxer indemnity, 1908	♌	4 30	7 25	4 07	3	4 56	6 58	4 19
26	Sa	Montana created a territory, 1864	♌	4 29	7 26	rises	3	4 55	6 58	rises
Trinity Sunday				Day's Length: Northern 14.57; Southern 14.04						
27	Su	Cornelius Vanderbilt born, 1794	♌	4 29	7 27	8 09	3	4 55	6 59	7 42
28	Mo	Battle of Great Meadows, 1754	♌	4 28	7 27	9 08	3	4 54	7 00	8 39
29	Tu	Rhode Island ratified constitution, 1790	♌	4 27	7 28	10 05	3	4 54	7 00	9 35
30	We	Battle of Bermuda Hundreds, 1864	♌	4 26	7 29	10 56	3	4 54	7 01	10 26
31	Th	South African war ended, 1902	♌	4 26	7 30	11 42	2	4 54	7 01	11 15

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HI-CLEAT TRACTOR TIRES

What you want most in a tractor tire is *traction*. This B. F. Goodrich Tire gives deeper bite and double grip. Its open tread design has no mud-catching pockets — springs dirt free with slingshot action. Get Hi-Cleat Silvertowns for real, down-to-earth traction! The "best tires on earth."

HI-CLEAT SILVERTOWNS



Almanac for June, 1945

6th Month
30 Days

Days of Month	Days of Week	MOON'S PHASES, E. S. T.	MOON'S PLACE	LATITUDE of Northern States			SUN FAST	LATITUDE of Southern States		
				SUN rises	SUN sets	MOON rises		SUN rises	SUN sets	MOON rises
		☾ Last Quarter, 8:15 A.M., 3d		H. M.	H. M.	H. M.		H. M.	H. M.	H. M.
		☾ New Moon, 11:26 P.M., 9th								
		☾ First Quarter, 9:05 A.M., 17th								
		☾ Full Moon, 10:08 A.M., 25th								
		HISTORICAL EVENTS								
1	Fr	Race Riots at Tulsa, Okla., 1921	♊	4 25	7 30	morn	2	4 53	7 02	11 59
2	Sa	Battle of Cold Harbor, 1864	♊	4 25	7 31	0 22	2	4 53	7 02	morn
1st Sunday after Trinity				Day's Length: Northern 15.07; Southern 14.10						
3	Su	Hobson sunk Merrimac, Santiago, 1898	♊	4 24	7 31	0 57	2	4 53	7 03	0 39
4	Mo	Missouri made a territory, 1812	♊	4 24	7 32	1 27	2	4 53	7 04	1 16
5	Tu	Americans took Augusta, Ga., 1781	♊	4 24	7 33	1 57	2	4 52	7 04	1 51
6	We	Nathan Hale, patriot, born 1756	♊	4 23	7 33	2 28	2	4 52	7 05	2 29
7	Th	Edwin Thomas Booth died, 1893	♊	4 23	7 34	2 59	1	4 52	7 05	3 07
8	Fr	Gen. Pershing arrived in London, 1917	♊	4 23	7 35	3 30	1	4 52	7 06	3 44
9	Sa	Charles Dickens died, 1870	♊	4 22	7 35	sets	1	4 52	7 06	sets
2d Sunday after Trinity				Day's Length: Northern 15.14; Southern 14.15						
10	Su	Battle of Brice's Cross Roads, Mo., 1864	♊	4 22	7 36	8 18	1	4 52	7 07	7 49
11	Mo	Detroit destroyed by fire, 1805	♊	4 22	7 37	9 21	1	4 51	7 07	8 51
12	Tu	Explosion on U.S.S. Mississippi, 1924	♊	4 22	7 37	10 14	0	4 51	7 08	9 46
13	We	Congress passes 14th Amendment, 1866	♊	4 22	7 38	11 00	0	4 51	7 08	10 33
14	Th	Robert M. Lafollette, statesman, born, 1855	♊	4 22	7 38	11 35	S	4 51	7 09	11 15
15	Fr	Alcock and Brown flew Atlantic, 1919	♊	4 21	7 39	morn	0	4 51	7 09	11 51
16	Sa	Battle of Secessionville, 1862	♊	4 21	7 39	0 06	0	4 51	7 09	morn
3d Sunday after Trinity				Day's Length: Northern 15.19; Southern 14.19						
17	Su	John Wesley, religious leader, born, 1703	♊	4 21	7 40	0 34	1	4 51	7 10	0 22
18	Mo	Clinton evacuated Philadelphia, 1778	♊	4 21	7 40	0 58	1	4 51	7 10	0 52
19	Tu	"Alabama" sunk by "Kearsarge," 1864	♊	4 21	7 40	1 22	1	4 52	7 11	1 22
20	We	Alaska proclaimed part of U. S., 1867	♊	4 22	7 41	1 46	1	4 52	7 11	1 48
21	Th	New Hampshire ratified constitution, 1788	♊	4 22	7 41	2 10	2	4 52	7 11	2 18
22	Fr	1st money issued by continental congress, 1775	♊	4 22	7 41	2 35	2	4 52	7 11	2 50
23	Sa	Post and Gatty began world flight, 1931	♊	4 22	7 41	3 06	2	4 53	7 11	3 25
4th Sunday after Trinity				Day's Length: Northern 15.19; Southern 14.18						
24	Su	Henry Ward Beecher, theologian, born, 1813	♊	4 23	7 42	3 41	2	4 53	7 11	4 04
25	Mo	Virginia ratified constitution, 1788	♊	4 23	7 42	rises	2	4 53	7 11	rises
26	Tu	Lord Kelvin, scientist, born, 1824	♊	4 23	7 42	8 53	3	4 54	7 12	8 22
27	We	Massacre at Cawnpore, India, 1857	♊	4 24	7 42	9 41	3	4 54	7 12	9 11
28	Th	Archduke Ferdinand assassinated, 1914	♊	4 24	7 42	10 23	3	4 54	7 12	9 58
29	Fr	Wm. James Mayo, physician, born, 1861	♊	4 24	7 41	11 00	3	4 55	7 12	10 40
30	Sa	Congress established Indian Territory, 1834	♊	4 25	7 41	11 32	3	4 55	7 12	11 18



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SPEEDLINER TRUCK TIRES

7th Month
31 Days



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B. F. Goodrich Implement Tires

Almanac for August, 1945

8th Month
31 Days

Days of Month	Days of Week	MOON'S PHASES, E. S. T.			MOON'S PLACE	LATITUDE of Northern States			SUN SLOW	LATITUDE of Southern States		
		☾ New Moon, 7:32 P.M., 7th ☾ First Quarter, 7:26 P.M., 15th ☾ Full Moon, 7:03 A.M., 23d ☾ Last Quarter, 10:44 P.M., 29th				SUN rises	SUN sets	MOON rises		SUN rises	SUN sets	MOON rises
		HISTORICAL EVENTS				H. M.	H. M.	H. M.		H. M.	H. M.	H. M.
1	We	Elihu Root made Secretary of War, 1899			♊	4 51	7 21	morn	6	5 13	6 59	morn
2	Th	Warren G. Harding died, 1923			♋	4 52	7 20	0 05	6	5 14	6 58	0 20
3	Fr	Columbus sailed from Palos, Spain, 1492			♌	4 53	7 19	0 42	6	5 15	6 57	1 03
4	Sa	Cornwallis retired to Yorktown, 1781			♍	4 54	7 18	1 25	6	5 16	6 56	1 51
10th Sunday after Trinity Day's Length: Northern 14.22; Southern 13.39												
5	Su	Statue of Liberty sent to U. S., 1886			♎	4 55	7 17	2 16	6	5 17	6 56	2 44
6	Mo	Lord Tennyson born, 1809			♏	4 56	7 16	3 13	6	5 17	6 55	3 41
7	Tu	War and Navy Dept's. established, 1789			♐	4 57	7 14	sets	6	5 18	6 54	sets
8	We	Montcalm took Ft. William Henry, 1757			♑	4 58	7 13	8 04	6	5 18	6 53	7 44
9	Th	Francis Scott Key, poet, born, 1780			♒	4 59	7 12	8 35	5	5 19	6 52	8 19
10	Fr	Smithsonian Institute established, 1846			♓	5 00	7 11	9 02	5	5 19	6 51	8 52
11	Sa	Fulton's Steamer given test run, 1807			♊	5 01	7 09	9 27	5	5 20	6 50	9 21
11th Sunday after Trinity Day's Length: Northern 14.05; Southern 13.28												
12	Su	Sir Wm. Phips sailed from Boston, 1690			♈	5 02	7 07	9 48	5	5 21	6 49	9 48
13	Mo	World's 1st taxicab appeared in N. Y. C., 1907			♉	5 03	7 06	10 13	5	5 21	6 48	10 18
14	Tu	French captured Fort Oswego, 1756			♊	5 04	7 04	10 38	5	5 22	6 47	10 48
15	We	Sir Walter Scott, author, born, 1771			♋	5 05	7 03	11 04	4	5 23	6 46	11 20
16	Th	Battle of Camden, 1780			♌	5 06	7 01	11 35	4	5 23	6 45	11 55
17	Fr	Gold discovered in Klondike, 1896			♍	5 08	7 00	morn	4	5 24	6 44	morn
18	Sa	Jay's Treaty with England approved, 1795			♎	5 09	6 59	0 11	4	5 25	6 43	0 35
12th Sunday after Trinity Day's Length: Northern 13.47; Southern 13.16												
19	Su	Balzac, French writer, died, 1850			♏	5 10	6 57	0 53	4	5 26	6 42	1 20
20	Mo	Brussels abandoned by Allies, 1914			♐	5 11	6 56	1 45	3	5 26	6 41	2 12
21	Tu	Frank A. Munsey, publisher, born, 1854			♑	5 12	6 55	2 44	3	5 27	6 40	3 10
22	We	Samuel P. Langley, inventor, born, 1834			♒	5 13	6 53	3 51	3	5 28	6 39	4 14
23	Th	Japan declared war on Germany, 1914			♓	5 14	6 52	rises	3	5 28	6 37	rises
24	Fr	Captain Webb swam the Channel, 1875			♊	5 15	6 50	8 03	2	5 29	6 36	7 51
25	Sa	Bradstreet attacked Ft. Frontenac, 1757			♋	5 17	6 49	8 34	2	5 29	6 34	8 29
13th Sunday after Trinity Day's Length: Northern 13.29; Southern 13.03												
26	Su	Germans sacked Louvain, 1914			♌	5 18	6 47	9 04	2	5 30	6 33	9 04
27	Mo	New Amsterdam surrendered to English, 1664			♍	5 19	6 45	9 34	1	5 31	6 32	9 41
28	Tu	Henry Hudson discovered Delaware River, 1609			♎	5 20	6 43	10 06	1	5 31	6 31	10 20
29	We	Second Battle of Bull Run, 1862			♏	5 21	6 41	10 42	1	5 32	6 30	11 02
30	Th	Washington retreated from Long Island, 1776			♐	5 22	6 39	11 23	1	5 32	6 29	11 48
31	Fr	1st transcontinental auto trip completed, 1903			♑	5 23	6 38	morn	0	5 33	6 28	morn



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Almanac for September, 1945

9th Month
30 Days

Days of Month	Days of Week	MOON'S PHASES, E. S. T.			MOON'S PLACE	LATITUDE of Northern States			SUN FAST	LATITUDE of Southern States		
		 New Moon,	8:43 A.M.,	6th		SUN rises	SUN sets	MOON rises		SUN rises	SUN sets	MOON rises
HISTORICAL EVENTS			H. M.	H. M.	H. M.	H. M.	H. M.	H. M.				
1	Sa	Tokyo destroyed by earthquake, 1923	♊	5 24	6 36	0 12	0	5 34	6 26	0 39		
14th Sunday after Trinity			Day's Length: Northern 13.10; Southern 12.49									
2	Su	Eugene Field, poet, born, 1850	♊	5 25	6 35	1 06	0	5 35	6 24	1 33		
3	Mo	Battle of Whitestone Hill, 1863	♋	5 26	6 33	2 06	1	5 35	6 23	2 32		
4	Tu	France declared a republic, 1870	♋	5 27	6 32	3 09	1	5 36	6 22	3 32		
5	We	1st Continental Congress met, 1774	♌	5 28	6 30	4 14	1	5 37	6 21	4 32		
6	Th	Mayflower sailed from America, 1620	♌	5 29	6 28	sets	2	5 37	6 19	sets		
7	Fr	Germany proposed armistice, 1918	♌	5 30	6 26	7 29	2	5 38	6 18	7 22		
8	Sa	Northern Pacific R. R. completed, 1883	♍	5 31	6 24	7 51	2	5 38	6 17	7 51		
15th Sunday after Trinity			Day's Length: Northern 12.50; Southern 12.37									
9	Su	Leo Tolstoi, philosopher, born, 1828	♍	5 32	6 22	8 15	3	5 39	6 16	8 19		
10	Mo	1st Battle of the Marne ended, 1914	♎	5 33	6 20	8 40	3	5 40	6 14	8 48		
11	Tu	O. Henry, author, born, 1862	♎	5 35	6 19	9 05	3	5 40	6 13	9 18		
12	We	House passed Fugitive Slave Bill, 1850	♏	5 36	6 17	9 34	4	5 41	6 11	9 52		
13	Th	Theodore Roosevelt, Jr., born, 1887	♏	5 37	6 15	10 07	4	5 42	6 10	10 29		
14	Fr	Americans entered Mexico City, 1847	♏	5 38	6 14	10 45	4	5 42	6 09	11 11		
15	Sa	Harper's Ferry captured, 1862	♐	5 39	6 12	11 32	5	5 43	6 07	11 59		
16th Sunday after Trinity			Day's Length: Northern 12.30; Southern 12.23									
16	Su	James J. Hill, industrialist, born, 1838	♐	5 40	6 10	morn	5	5 43	6 06	morn		
17	Mo	Washington's Farewell Address, 1796	♑	5 41	6 08	0 27	5	5 44	6 05	0 54		
18	Tu	Japs began Manchurian invasion, 1931	♑	5 42	6 06	1 29	6	5 45	6 03	1 54		
19	We	Battle of Stillwater, 1777	♒	5 43	6 04	2 38	6	5 45	6 02	2 59		
20	Th	Magellan began world voyage, 1519	♒	5 44	6 02	3 51	6	5 46	6 01	4 06		
21	Fr	Henry G. Stimson, statesman, born, 1867	♒	5 45	6 00	rises	7	5 46	5 59	rises		
22	Sa	Michael Faraday, scientist, born, 1791	♓	5 46	5 59	7 00	7	5 47	5 58	7 00		
17th Sunday after Trinity			Day's Length: Northern 12.10; Southern 12.09									
23	Su	Spanish constitution suspended, 1923	♓	5 47	5 57	7 32	7	5 48	5 57	7 37		
24	Mo	Fort Orange surrendered to English, 1664	♓	5 48	5 55	8 04	8	5 49	5 55	8 15		
25	Tu	Columbus sailed on 2nd voyage, 1493	♓	5 49	5 54	8 40	8	5 49	5 54	8 58		
26	We	Federal Trade Commission established, 1914	♓	5 50	5 52	9 20	9	5 50	5 52	9 44		
27	Th	Samuel Adams, patriot, born, 1722	♓	5 51	5 50	10 08	9	5 51	5 51	10 34		
28	Fr	G. Clemenceau, statesman, born, 1841	♓	5 52	5 49	11 02	9	5 51	5 50	11 29		
29	Sa	Troopship "Albany" sailed, disappeared, 1854	♓	5 54	5 47	morn	10	5 52	5 48	morn		
18th Sunday after Trinity			Day's Length: Northern 11.50; Southern 11.54									
30	Su	Bismarck made Prussian premier, 1862	♓	5 55	5 45	0 01	10	5 53	5 47	0 27		

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RADIATOR SOLDER 10 oz. 39c 	WAX PREP CLEANER 10 oz. 35c 	LIQUID POLISHING WAX pint 39c 

B. F. Goodrich Accessories

Almanac for October, 1945

10th Month
31 Days

Days of Month	Days of Week	MOON'S PHASES, E. S. T.			MOON'S PLACE	LATITUDE of Northern States			SUN FAST	LATITUDE of Southern States		
		☾ New Moon, 0:22 A.M., 6th ☾ First Quarter, 4:38 A.M., 14th ☾ Full Moon, 0:32 A.M., 21st ☾ Last Quarter, 5:30 P.M., 27th				SUN rises	SUN sets	MOON rises		SUN rises	SUN sets	MOON rises
HISTORICAL EVENTS					H. M.	H. M.	H. M.	H. M.	H. M.	H. M.		
1	Mo	Los Angeles newspaper building bombed, 1909			☾	5 56	5 43	1 03	10	5 54	5 46	1 26
2	Tu	Battle of Anderson's Cross Roads, 1863			☾	5 57	5 42	2 07	11	5 54	5 44	2 25
3	We	Howe, sewing machine, inventor, died, 1867			☾	5 58	5 40	3 11	11	5 55	5 43	3 25
4	Th	Frederic Remington, artist, born, 1861			☾	5 59	5 38	4 13	11	5 55	5 42	4 21
5	Fr	Erie Canal completed, 1825			☾	6 00	5 36	5 13	12	5 56	5 41	5 17
6	Sa	Clinton captured Hudson forts, 1777			☾	6 02	5 34	sets	12	5 57	5 39	sets
19th Sunday after Trinity					Day's Length: Northern 11.30; Southern 11.40							
7	Su	Colonial Stamp Act Cong. com. met N.Y., 1765			☾	6 03	5 33	6 43	12	5 58	5 38	6 50
8	Mo	Tremendous eruption of Mt. Vesuvius, 1868			☾	6 04	5 31	7 08	12	5 58	5 37	7 19
9	Tu	Waterspout destroyed Funchal, Madeira, 1803			☾	6 05	5 30	7 33	13	5 59	5 35	7 50
10	We	1st steamer on Great Lakes left Buffalo, 1818			☾	6 06	5 28	8 05	13	5 59	5 34	8 26
11	Th	Telegram circles world in 4½ minutes, 1932			☾	6 07	5 26	8 42	13	6 00	5 33	9 07
12	Fr	Lyman Beecher, clergyman, born, 1775			☾	6 08	5 24	9 23	13	6 01	5 32	9 51
13	Sa	Cornerstone of White House laid, 1792			☾	6 09	5 22	10 15	14	6 02	5 30	10 43
20th Sunday after Trinity					Day's Length: Northern 11.11; Southern 11.25							
14	Su	1st steamer on Mississippi, 1814			☾	6 10	5 21	11 12	14	6 03	5 28	11 39
15	Mo	Ostend occupied by Germans, 1914			☾	6 11	5 19	morn	14	6 03	5 27	morn
16	Tu	1st Filipino Legislature met, 1907			☾	6 12	5 17	0 16	14	6 04	5 26	0 40
17	We	Thomas Fortune Ryan, financier, born, 1851			☾	6 14	5 16	1 26	15	6 05	5 25	1 44
18	Th	Thomas B. Reed, statesman, born, 1839			☾	6 15	5 14	2 40	15	6 06	5 24	2 52
19	Fr	Battle of Buckland's Mills, 1863			☾	6 17	5 13	3 54	15	6 06	5 23	3 59
20	Sa	2nd Panama Canal Co. formed, 1894			☾	6 18	5 11	rises	15	6 07	5 22	rises
21st Sunday after Trinity					Day's Length: Northern 10.51; Southern 11.14							
21	Su	S. T. Coleridge, author, born, 1772			☾	6 19	5 10	5 59	15	6 07	5 21	6 07
22	Mo	Princeton University chartered, 1746			☾	6 20	5 09	6 34	15	6 08	5 20	6 49
23	Tu	Francis Hopkinson Smith born, 1838			☾	6 21	5 07	7 12	16	6 09	5 19	7 34
24	We	George Washington bridge opened, 1931			☾	6 22	5 06	7 59	16	6 10	5 18	8 25
25	Th	Richard E. Byrd, explorer, born, 1888			☾	6 23	5 04	8 52	16	6 11	5 17	9 19
26	Fr	1st American troops at front, 1917			☾	6 24	5 02	9 51	16	6 12	5 16	10 19
27	Sa	Germany agreed to Wilson's terms, 1918			☾	6 26	5 01	10 52	16	6 13	5 15	11 20
22d Sunday after Trinity					Day's Length: Northern 10.32; Southern 11.01							
28	Su	Statue of Liberty unveiled, 1886			☾	6 28	5 00	11 58	16	6 13	5 14	morn
29	Mo	James Boswell, biographer, born, 1740			☾	6 29	4 58	morn	16	6 14	5 13	0 20
30	Tu	1st International Labor Conference, 1919			☾	6 30	4 57	1 03	16	6 15	5 12	1 19
31	We	1st message over Pacific cable, 1902			☾	6 31	4 56	2 06	16	6 15	5 11	2 16

For a Real Battery Powerhouse . . .

Get a B. F. Goodrich GLASSTEX

Dependable Starting . . . in any kind of weather because of fully sized, fully powered plates.

Longer Life . . . from special glass mats that protect the plates, keep them producing a steady flow of power longer.

BATTERY SERVICE . . . FREE!

Regular care of your battery helps to head off battery failure. Ask for a free check-up when you come in.



Almanac for November, 1945

11th Month
30 Days

Days of Month	Days of Week	MOON'S PHASES, E. S. T.		MOON'S PLACE	LATITUDE of Northern States			SUN FAST	LATITUDE of Southern States		
		☾ New Moon, 6:11 P.M., 4th ☾ First Quarter, 6:34 P.M., 12th ☾ Full Moon, 10:13 A.M., 19th ☾ Last Quarter, 8:28 A.M., 26th			SUN rises	SUN sets	MOON rises		SUN rises	SUN sets	MOON rises
HISTORICAL EVENTS		H. M.	H. M.	H. M.	H. M.	H. M.					
1	Th	Postal Money Order system established, 1864	♊	6 32	4 54	3 07	16	6 16	5 10	3 13	
2	Fr	Warren G. Harding, president, born, 1865	♊	6 33	4 53	4 06	16	6 17	5 09	4 06	
3	Sa	Panama declared independence, 1903	♊	6 35	4 52	5 06	16	6 18	5 08	5 00	
23d Sunday after Trinity			Day's Length: Northern 10.14; Southern 10.48								
4	Su	Patent on cash register issued, 1879	♋	6 36	4 50	sets	16	6 19	5 07	sets	
5	Mo	Mutiny in German fleet, 1918	♋	6 38	4 49	5 38	16	6 20	5 07	5 52	
6	Tu	Ignace Jan Paderewski born, 1860	♋	6 39	4 48	6 06	16	6 21	5 06	6 27	
7	We	Battle of Tippecanoe, 1811	♋	6 40	4 46	6 41	16	6 22	5 05	7 05	
8	Th	Montana admitted to the Union, 1889	♋	6 41	4 45	7 22	16	6 23	5 04	7 48	
9	Fr	Great fire in Boston, 1872	♋	6 42	4 44	8 07	16	6 24	5 04	8 36	
10	Sa	Martin Luther, theologian, born, 1483	♋	6 44	4 43	9 02	16	6 25	5 03	9 31	
24th Sunday after Trinity			Day's Length: Northern 9.57; Southern 10.36								
11	Su	Haymarket anarchists hanged, 1887	♌	6 45	4 42	10 03	16	6 26	5 02	10 29	
12	Mo	Montreal surrendered to Americans, 1775	♌	6 46	4 41	11 09	16	6 27	5 01	11 30	
13	Tu	1st college football game, 1869	♌	6 48	4 40	morn	16	6 28	5 01	morn	
14	We	Pilsudski made Polish dictator, 1918	♌	6 49	4 39	0 19	15	6 29	5 00	0 33	
15	Th	Americans occupied Tampico, 1846	♌	6 50	4 38	1 30	15	6 29	4 59	1 39	
16	Fr	Federal Reserve system in operation, 1914	♌	6 51	4 37	2 43	15	6 30	4 59	2 45	
17	Sa	1st Congress at Washington, 1800	♌	6 53	4 36	3 57	15	6 31	4 58	3 55	
25th Sunday after Trinity			Day's Length: Northern 9.41; Southern 10.26								
18	Su	Hay-Pauncefote Treaty signed, 1901	♍	6 54	4 35	5 16	15	6 32	4 58	5 06	
19	Mo	James A. Garfield, president, born, 1831	♍	6 55	4 34	rises	15	6 33	4 57	rises	
20	Tu	Americans evacuated Fort Lee, 1776	♍	6 57	4 34	5 45	14	6 34	4 57	6 09	
21	We	German fleet surrendered, 1918	♍	6 58	4 33	6 36	14	6 35	4 57	7 02	
22	Th	1st Protestant Church in Indiana, 1798	♍	6 59	4 32	7 34	14	6 36	4 56	8 02	
23	Fr	Franklin Pierce, president, born, 1804	♍	7 00	4 31	8 38	14	6 36	4 56	9 05	
24	Sa	Zachary Taylor, president, born, 1784	♍	7 01	4 31	9 45	13	6 37	4 56	10 08	
26th Sunday after Trinity			Day's Length: Northern 9.27; Southern 10.17								
25	Su	Battle of Chattanooga, 1863	♎	7 03	4 30	10 52	13	6 38	4 55	11 09	
26	Mo	Sandwich Islands discovered, 1778	♎	7 04	4 30	11 56	13	6 39	4 55	morn	
27	Tu	Andean Boundary dispute settled, 1902	♎	7 05	4 29	morn	12	6 40	4 55	0 09	
28	We	Magellan entered the Pacific, 1520	♎	7 06	4 29	0 59	12	6 41	4 54	1 05	
29	Th	Savannah captured by British, 1778	♎	7 07	4 28	1 58	12	6 42	4 54	1 59	
30	Fr	Mark Twain, author, born, 1835	♎	7 08	4 28	2 57	11	6 43	4 54	2 54	



NO CHAINS
NEEDED!

Traction tread
grips — and goes,
in all weather —
the year 'round.

NEW MUD — SNOW TIRE!

Here's a brand new traction tire that's designed for
use on the pavement — and off the pavement too!

- Deep, open tread is self-cleaning — does not pack with mud or snow or pick up gravel.
- Tread is non-directional — pulls equally in reverse or forward gear.
- Rides well — handles well — wears well.

B. F. Goodrich Tires

Almanac for December, 1945

12th Month
31 Days

Days of Month	Days of Week	MOON'S PHASES, E. S. T.	MOON'S PLACE	LATITUDE of Northern States			SUN EAST	LATITUDE of Southern States		
				SUN rises	SUN sets	MOON rises		SUN rises	SUN sets	MOON rises
HISTORICAL EVENTS				H. M.	H. M.	H. M.		H. M.	H. M.	H. M.
1	Sa	1st typewriter patent granted, 1866	♊	7 09	4 28	3 58	11	6 44	4 54	3 48
Advent Sunday				Day's Length: Northern 9.18; Southern 10.09						
2	Su	Monroe Doctrine propounded, 1823	♊	7 10	4 28	4 58	11	6 45	4 54	4 42
3	Mo	Mary Baker Eddy died, 1910	♊	7 11	4 27	5 59	10	6 45	4 54	5 37
4	Tu	Thomas Carlyle born, 1795	♊	7 12	4 27	sets	10	6 46	4 54	sets
5	We	Brooklyn Theatre fire, 1876	♊	7 14	4 27	5 23	9	6 46	4 54	5 46
6	Th	Irish Free State established, 1922	♊	7 15	4 27	6 04	9	6 47	4 54	6 34
7	Fr	Delaware accepted the Constitution, 1787	♊	7 16	4 27	6 56	8	6 48	4 54	7 26
8	Sa	1st written message to Congress, 1801	♊	7 17	4 26	7 56	8	6 49	4 54	8 23
2d Sunday in Advent				Day's Length: Northern 9.08; Southern 10.04						
9	Su	Riots in Birmingham, Ala., 1888	♊	7 18	4 26	9 00	8	6 50	4 54	9 23
10	Mo	Peace Treaty with Spain signed, 1898	♊	7 19	4 26	10 07	7	6 51	4 55	10 25
11	Tu	Fatal prison riot at Auburn, N. Y., 1929	♊	7 20	4 26	11 15	7	6 51	4 55	11 27
12	We	Last allied troops left the Saar, 1930	♊	7 21	4 26	morn	6	6 52	4 55	morn
13	Th	Battle of Morristown, N. J., 1776	♊	7 21	4 26	0 25	6	6 53	4 55	0 30
14	Fr	Amundsen reached South Pole, 1911	♊	7 22	4 27	1 34	5	6 53	4 55	1 34
15	Sa	Sitting Bull killed, 1890	♊	7 23	4 27	2 49	5	6 54	4 56	2 43
3d Sunday in Advent				Day's Length: Northern 9.04; Southern 10.01						
16	Su	Boston Tea Party, 1773	♊	7 23	4 27	4 05	4	6 55	4 56	3 52
17	Mo	1st Wright plane flight, 1903	♊	7 24	4 27	5 22	4	6 56	4 57	5 03
18	Tu	Edward Alexander MacDowell, composer, b., 1861	♊	7 24	4 27	rises	3	6 56	4 57	rises
19	We	Washington at Valley Forge, 1777	♊	7 25	4 28	5 14	3	6 57	4 57	5 42
20	Th	U. S. took possession Louisiana, 1803	♊	7 25	4 28	6 16	2	6 58	4 58	6 44
21	Fr	Pilgrims landed at Plymouth, 1620	♊	7 26	4 29	7 22	2	6 58	4 58	7 50
22	Sa	1st ferry, N. Y. to Jersey City, 1861	♊	7 26	4 29	8 32	1	6 59	4 59	8 54
4th Sunday in Advent				Day's Length: Northern 9.03; Southern 10.00						
23	Su	Eugene V. Debs pardoned, 1921	♊	7 27	4 30	9 40	1	6 59	4 59	9 56
24	Mo	Germans first bombed England, 1914	♊	7 27	4 30	10 46	0	7 00	5 00	10 55
25	Tu	Washington crossed the Delaware, 1776	♊	7 28	4 31	11 48	S	7 00	5 01	11 51
26	We	Madame Curie discovered radium, 1898	♊	7 28	4 31	morn	1	7 00	5 01	morn
27	Th	Battle of Chickasaw Bayou, 1862	♊	7 28	4 32	0 46	1	7 01	5 02	0 46
28	Fr	Government took over railroads, 1917	♊	7 29	4 33	1 47	2	7 01	5 02	1 41
29	Sa	Wilson protested ship search, 1914	♊	7 29	4 34	2 48	2	7 01	5 03	2 35
Sunday after Christmas				Day's Length: Northern 9.06; Southern 10.02						
30	Su	Rudyard Kipling, author, born, 1865	♊	7 29	4 35	3 49	3	7 01	5 03	3 29
31	Mo	B. F. Goodrich Co. Founded, 1870	♊	7 30	4 36	4 50	3	7 02	5 04	4 25

A Trade Mark
Backed by

75 YEARS of PROGRESS



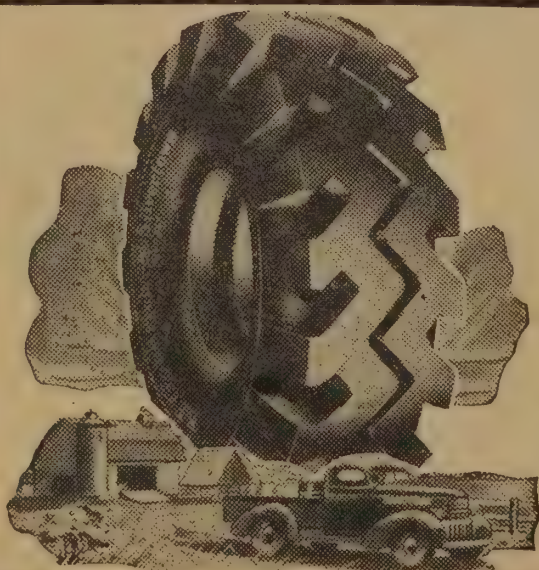
1945 marks the 75th anniversary of the founding of the B. F. Goodrich Company, and the trade mark shown above, backed by these many years of continuous research and development, is your guaranty of highest quality — of highest dollar value.

B. F. Goodrich — First in Rubber

Almanac for January, 1946

1st Month
31 Days

Days of Month	Days of Week	MOON'S PHASES, E. S. T.			MOON'S PLACE	LATITUDE of Northern States			SUN SLOW	LATITUDE of Southern States		
		☾ New Moon, 7:30 A.M., 3d ☾ First Quarter, 3:27 P.M., 10th ☾ Full Moon, 9:46 A.M., 17th ☾ Last Quarter, 11:59 P.M., 24th				SUN rises	SUN sets	MOON rises		SUN rises	SUN sets	MOON rises
		HISTORICAL EVENTS										
1	Tu	Paul Revere born, 1735			♈	7 30	4 37	5 47	4	7 03	5 05	5 24
2	We	Battle of Murfreesboro ended, 1863			♈	7 30	4 38	6 55	4	7 03	5 06	6 32
3	Th	Postal Savings Banks established, 1911			♈	7 30	4 38	sets	5	7 03	5 06	sets
4	Fr	Russia recognized Finnish independence, 1918			♈	7 30	4 39	5 44	5	7 03	5 07	6 16
5	Sa	Zeulon M. Pike, explorer, born, 1779			♈	7 30	4 40	6 49	5	7 03	5 08	7 18
Epiphany						Day's Length: Northern 9.11; Southern 10.05						
6	Su	Marines ordered to Nicaragua, 1927			♈	7 30	4 41	7 57	6	7 04	5 09	8 21
7	Mo	1st Balloon flight across English Channel, 1785			♈	7 30	4 42	9 07	6	7 04	5 10	9 25
8	Tu	Robert Schumann, composer, born, 1810			♈	7 30	4 43	10 19	7	7 04	5 11	10 30
9	We	Connecticut ratified constitution, 1788			♈	7 30	4 44	11 31	7	7 04	5 11	11 35
10	Th	Treaty of Versailles effective, 1920			♈	7 29	4 45	morn	8	7 04	5 12	morn
11	Fr	Alexander Hamilton, statesman, born, 1757			♈	7 29	4 46	0 45	8	7 04	5 13	0 41
12	Sa	B. & O. Railroad began operation, 1853			♈	7 29	4 47	1 58	8	7 03	5 14	1 48
1st Sunday after Epiphany						Day's Length: Northern 9.21; Southern 10.12						
13	Su	Stephen Collins Foster died, 1864			♈	7 28	4 49	3 11	9	7 03	5 15	2 56
14	Mo	Congress confirmed treaty with Britain, 1784			♈	7 28	4 50	4 24	9	7 03	5 16	4 05
15	Tu	Vermont declared independence, 1777			♈	7 28	4 51	5 37	9	7 03	5 17	5 15
16	We	1st meeting of League of Nations, 1920			♈	7 27	4 53	6 48	10	7 02	5 18	6 25
17	Th	Benj. Franklin, printer and statesman, born, 1706			♈	7 27	4 54	rises	10	7 02	5 19	rises
18	Fr	Rock slide at Niagara Falls, 1931			♈	7 26	4 55	6 06	10	7 02	5 19	6 34
19	Sa	James Watt, inventor of steam engine, b., 1736			♈	7 26	4 56	7 13	11	7 02	5 20	7 38
2d Sunday after Epiphany						Day's Length: Northern 9.32; Southern 10.20						
20	Su	Chicago Crib disaster, 1909			♈	7 25	4 57	8 18	11	7 01	5 21	8 40
21	Mo	1st printing press in America, 1639			♈	7 25	4 58	9 23	11	7 01	5 22	9 38
22	Tu	Massacre at River Raisin, Michigan, 1813			♈	7 24	4 59	10 26	12	7 01	5 23	10 34
23	We	Ship "Bounty" burned by mutineers, 1790			♈	7 23	5 00	11 29	12	7 00	5 24	11 29
24	Th	Attempt to buy Danish West Indies, 1902			♈	7 22	5 02	morn	12	7 00	5 25	morn
25	Fr	Wm. Edgar Borah, politician, born, 1865			♈	7 21	5 03	0 29	12	6 59	5 26	0 24
26	Sa	Bessemer Steel Converter patented, 1869			♈	7 20	5 04	1 29	13	6 59	5 27	1 18
3d Sunday after Epiphany						Day's Length: Northern 9.47; Southern 10.30						
27	Su	Virginia admitted to Union, 1870			♈	7 19	5 06	2 30	13	6 58	5 28	2 13
28	Mo	American control of Cuba ended, 1909			♈	7 18	5 08	3 31	13	6 57	5 29	3 10
29	Tu	William McKinley, president, born, 1843			♈	7 17	5 09	4 33	13	6 57	5 30	4 08
30	We	Adolph Hitler became Chancellor of Ger., 1933			♈	7 17	5 11	5 33	13	6 56	5 31	5 05
31	Th	Dutch navigators reach Pacific via C. Horn, 1615			♈	7 16	5 12	6 30	14	6 56	5 32	6 02



Here's a double-duty FARMING TRUCK TIRE

For extra traction off the pavement, for long wear on the pavement, put All-Purpose Silvertowns on your truck. Their wide riding bars give smooth going and long wear. The cleated design gives positive grip and self-cleaning action. Rugged construction; cooler, self-ventilating tread; long wearing. You start saving the minute you change to . . .

B. F. Goodrich Tires

Almanac for February, 1946

2nd Month
28 Days

Days of Month	Days of Week	MOON'S PHASES, E. S. T.	MOON'S PLACE	LATITUDE of Northern States			SUN SLOW	LATITUDE of Southern States		
				SUN rises	SUN sets	MOON sets		SUN rises	SUN sets	MOON sets
				H. M.	H. M.	H. M.		H. M.	H. M.	H. M.
1	Fr	Daniel Boone captured by Indians, 1775	♌	7 15	5 13	sets	14	6 55	5 33	sets
2	Sa	Arizona ceded to U. S., 1848	♌	7 14	5 14	5 46	14	6 55	5 34	6 09
4th Sunday after Epiphany				Day's Length: Northern 10.02; Southern 10.41						
3	Su	U. S. broke with Germany, 1917	♍	7 13	5 15	6 55	14	6 54	5 35	7 15
4	Mo	Washington elected 1st president, 1789	♍	7 12	5 16	8 06	14	6 53	5 35	8 22
5	Tu	Dwight Lyman Moody, preacher, born, 1837	♎	7 11	5 18	9 20	14	6 52	5 36	9 28
6	We	Senate ratified Spanish Peace Treaty, 1899	♎	7 10	5 19	10 35	14	6 52	5 37	10 33
7	Th	1st telephone N. Y. to Chicago, 1892	♎	7 09	5 20	11 47	14	6 51	5 38	11 38
8	Fr	Japs defeated Russians at Port Arthur, 1904	♏	7 08	5 22	morn	14	6 50	5 39	morn
9	Sa	Wm. Henry Harrison, president, born, 1773	♏	7 07	5 23	0 58	14	6 49	5 40	0 45
5th Sunday after Epiphany				Day's Length: Northern 10.18; Southern 10.53						
10	Su	Upper and lower Canada united, 1841	♏	7 06	5 24	2 12	14	6 48	5 41	1 54
11	Mo	Thomas Alva Edison born in Milan, Ohio, 1847	♏	7 04	5 25	3 26	14	6 47	5 42	3 02
12	Tu	Franklin petition for slavery abolition, 1790	♐	7 02	5 26	4 35	14	6 46	5 43	4 08
13	We	1st passenger train in New Mexico, 1879	♐	7 01	5 27	5 40	14	6 46	5 43	5 11
14	Th	Capt. Cook killed in Hawaii, 1779	♐	7 00	5 28	6 32	14	6 45	5 44	6 05
15	Fr	Mayor Cermak fatally wounded, 1933	♑	6 58	5 29	rises	14	6 44	5 45	rises
16	Sa	Spain declared war on England, 1656	♑	6 57	5 31	6 00	14	6 43	5 46	6 23
Septuagesima Sunday				Day's Length: Northern 10.37; Southern 11.05						
17	Su	Congress ratified Ghent Treaty, 1815	♑	6 56	5 33	7 05	14	6 42	5 47	7 23
18	Mo	Sub blockade of England began, 1915	♒	6 54	5 34	8 10	14	6 41	5 48	8 21
19	Tu	1st coal fired locomotive tested, 1831	♒	6 53	5 35	9 14	14	6 40	5 49	9 17
20	We	David Garrick, actor, born, 1716	♒	6 51	5 37	10 17	14	6 39	5 50	10 12
21	Th	Washington monument dedicated, 1885	♒	6 49	5 38	11 19	14	6 38	5 51	11 07
22	Fr	1st cross continent mail plane flight, 1920	♓	6 48	5 40	morn	14	6 36	5 51	morn
23	Sa	1st trading ship to China left N. Y., 1784	♓	6 47	5 41	0 20	13	6 35	5 52	0 01
Sexagesima Sunday				Day's Length: Northern 10.57; Southern 11.19						
24	Su	Impeachment of President Johnson, 1868	♓	6 45	5 42	1 19	13	6 34	5 53	0 58
25	Mo	Hudson River Tunnel opened, 1908	♓	6 43	5 43	2 17	13	6 33	5 53	1 55
26	Tu	Wilson asked arms for merchant ships, 1917	♊	6 42	5 44	3 15	13	6 32	5 54	2 51
27	We	Last issue of New York "World," 1931	♊	6 40	5 45	4 12	13	6 30	5 55	3 47
28	Th	British protectorate over Egypt ended, 1922	♊	6 38	5 47	5 09	13	6 29	5 56	4 44

B. F. Goodrich Hi-Cleat Tires Give You What You Want . . . **POSITIVE TRACTION!**

Thousands of farmers get "the best traction on earth" with this B. F. Goodrich Hi-Cleat Tire. Open, pocket-free tread gives positive self-cleaning; paired cleats give double grip; open-center design gives deeper bite. Here's *traction* when and where you want it!

HI-CLEAT SILVERTOWNS



Standard Weights and Measures

Avoirdupois Weight

(Used in weighing all articles except drugs, gold, silver and precious stones)

27 11/32 grains.....	1 dram
16 drams	1 ounce
16 ounces	1 pound
25 pounds	1 quarter
100 pounds	1 cwt.
20 cwt.	} 1 ton
2000 pounds	
2240 pounds	1 long ton

Dry Measure

(Used in measuring dry articles)

2 pints	1 quart
8 quarts	1 peck
4 pecks	1 bushel

Note: A bushel contains 2150.42 cu. in.

Linear Measure

(Used in measuring lengths and distances)

12 inches	1 foot
3 feet	1 yard
5½ yards	} 1 rod or pole
16½ feet	
40 rods	1 furlong
8 furlongs	1 statute mile
320 rods	} 1 mile
or	
5280 feet	

Square Measure

(Used in measuring the area of surface)

144 square inches	1 square foot
9 square feet	1 square yard
30¼ square yards	} 1 square rod
or	
272¼ square feet	

160 square rods	1 acre
640 acres	1 square mile

Note: A perch is a square rod, and a rood is 40 square rods.

Land Measure

10 rods by 16 rods =	1 acre
5 rods by 32 rods =	1 acre
4 rods by 40 rods =	1 acre
5 yards by 968 yards =	1 acre
20 yards by 242 yards =	1 acre
40 yards by 121 yards =	1 acre
220 feet by 198 feet =	1 acre
110 feet by 396 feet =	1 acre
60 feet by 726 feet =	1 acre
300 feet by 145.2 feet =	1 acre
4840 square yards =	1 acre

Cubic Measure

(Used in measuring things which have three dimensions)

1728 cubic inches	1 cubic foot
27 cubic feet	1 cubic yard
128 cubic feet	1 cord

Liquid Measure

(Used in measuring liquids)

4 gills	1 pint
2 pints	1 quart
4 quarts	1 gallon
231 cubic inches	1 gallon
31½ gallons	1 barrel
2 barrels	1 hogshead

Apothecaries' Measure

(used in compounding medicines)

DRY

20 grains (gr)	1 scruple
3 scruples	1 dram
8 drams	1 ounce
12 ounces	1 pound

FLUID

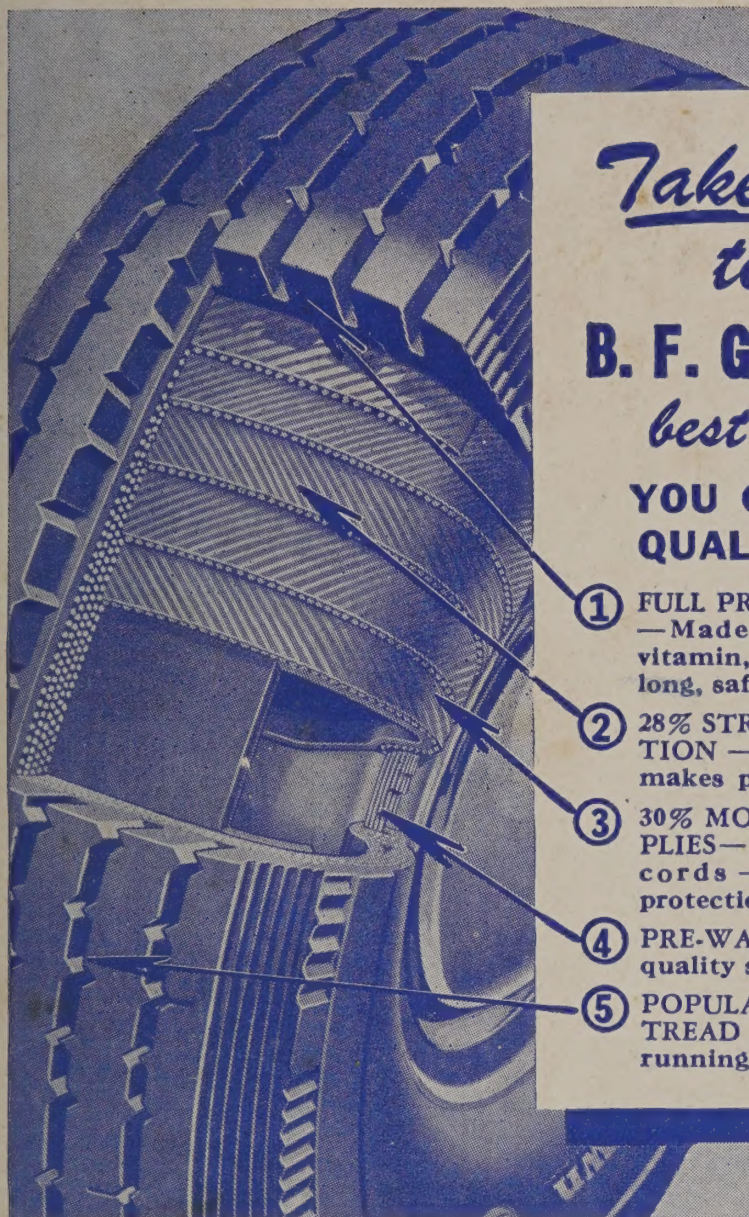
60 minims	1 fluid dram
8 fluid drams	1 fluid ounce
16 fluid ounces	1 pint
8 pints	1 gallon

Mariners' Measure

6 feet=	1 fathom
120 fath.=	1 cable length
10 cable lengths=	1 nautical mile
5,280 feet=	1 sta. mile
6,085 ft.=	1 nautical mile

Kitchen Measures

40-50 drops=	1 teaspoon
3 teaspoons=	1 tablespoon
2 tablespoons=	1 fluid ounce
16 tablespoons=	1 cup
2 cups=	1 pint
3 cups pastry, bread or graham flour=	1 pound
3¾ cups whole wheat flour=	1 pound
3 cups corn meal=	1 pound
4¾ cups rolled oats=	1 pound
2 cups lard=	1 pound
2 cups butter=	1 pound
2⅔ cups brown sugar=	1 pound
2 cups granulated sugar=	1 pound
2 cups raisins (heaped)=	1 pound
4½ cups coffee=	1 pound
8 to 10 average eggs=	1 pound
1 square chocolate=	1 ounce



*Take-apart test
tells why*

**B. F. Goodrich Is Your
best tire value!**

**YOU GET ALL THESE
QUALITY FEATURES:**

- ① **FULL PRE-WAR TREAD THICKNESS** — Made with Duramin, the "tire vitamin," that fights wear, provides long, safe mileage.
- ② **28% STRONGER CORD CONSTRUCTION** — Cord better than pre-war, makes plies stronger and tire safer.
- ③ **30% MORE RUBBER BETWEEN THE PLYS** — Reduces the stress between cords — gives added blow-out protection.
- ④ **PRE-WAR BEAD WIRE** — Same high quality spring steel.
- ⑤ **POPULAR PRE-WAR SILVERTOWN TREAD DESIGN** — Non-skid, quiet-running.

It's three years ahead of all others!

Long before the Japs cut off our rubber supply, B. F. Goodrich Tires made with more than 50% synthetic rubber were proving themselves on America's highways in the famous 80,000,000 mile road test.

That was *three full years* before any other company made and sold tires that contained synthetic rubber.

This *extra* experience goes into today's all-synthetic B. F. Goodrich Silvertowns. And enthusiastic reports from all over the country tell how it's showing up in extra tire safety . . . extra tire mileage!

When *you* buy new tires, profit by this experience. Be sure to get B. F. Goodrich Silvertowns.





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GALLIPOLIS, OHIO

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TUBES • ACCESSORIES
FARM AND HOME SUPPLIES



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